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# PORT OF SAN FRANCISCO ECONOMIC IMPACT REPORT

Prepared For  
The Port of San Francisco

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By  
Trade Information Planning Systems  
September 1988



# ***PORT OF SAN FRANCISCO***

## ***ECONOMIC IMPACT STUDY***

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# REPORT OF THE COMMISSION

## ON THE ECONOMIC IMPACT OF THE

### **EXECUTIVE SUMMARY**

THE ECONOMIC IMPACT OF THE

1. The Commission has conducted a study of the economic impact of the

2. The study was conducted in accordance with the

3. The results of the study are as follows:

4. The Commission has found that the

5. The Commission has also found that the

6. The Commission has further found that the

7. The Commission has also found that the

8. The Commission has further found that the

9. The Commission has also found that the

10. The Commission has further found that the



# *PORT OF SAN FRANCISCO*

## *ECONOMIC IMPACT STUDY*

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# EXECUTIVE SUMMARY

## INTRODUCTION

The Port of San Francisco is one of the most diverse ports in the United States. The Port has more than 2,000 lessees and/or permit holders representing a broad spectrum of users. Users include the following six sectors:

- o Shipping Services
- o Ship Repair
- o Passenger Vessel Operations
- o Fisheries
- o Restaurants & Retail Shops
- o Office and Other Commercial Space

The Port retained Trade Information Planning Systems (TIPS) to undertake surveys of existing operations and to prepare estimates of the economic impacts of all sectors for the base year 1986. TIPS received substantial assistance from many individuals during the course of the study.

The purpose of the study was to quantify the Port's role as a major catalyst for economic development in the City of San Francisco. The following report summarizes the economic impact of the Port in terms of employment, payroll and revenues generated by each of these sectors.

## METHODOLOGY

Economic impact begins with a definition of the direct employment, payroll and revenues generated by firms associated with the Port. These direct impacts were established by surveying or interviewing selected firms as well as by evaluating appropriate government publications and other recent, relevant reports. Direct employment is measured in terms of full time equivalent jobs (FTEs) so that part time jobs are not treated equally with full time jobs.

Next, multipliers are used to quantify the indirect and induced impacts resulting from direct employment, payroll and revenues. Indirect impacts occur when firms engaged directly in port activities purchase supplies and materials from other firms or hire outside contractors. An example would be the hiring of outside contractors by San Francisco ship repair yards. Induced impacts occur when employees directly employed by a Port business spend their disposable





incomes on food, transportation, shelter, and other goods and services. The summation of direct, indirect and induced impacts are said to comprise the total impacts of the Port.

The multipliers used in this study come from several computer runs undertaken by TIPS using the Port Economic Impact Input/Output Model developed by the American Association of Port Authorities and the United States Maritime Administration. This model which is called "Portkit" was calibrated to City of San Francisco data inputs including employment, salaries, cargo tonnage, port capital expenditures and other variables to estimate City-wide economic impacts. Estimates of fishing industry impacts were complicated by the proprietary nature of baseline data. Fisheries impacts were based upon limited, secondary data and a combination of economic modelling techniques TIPS feels best represents San Francisco.

## DEFINITION OF ECONOMIC IMPACTS

The Port provided direct full time employment for approximately 10,328 persons with a payroll exceeding \$224 million in 1986. The revenues from all businesses operating from port facilities or otherwise engaged in business with the Port was estimated to be \$776 million in 1986. These impacts are considered direct impacts of the Port. In addition, Port-related firms generated \$3.1 million and \$2.0 million to the City's General Fund in Payroll Taxes and Possessory Interest Taxes respectively in 1986.

Total impacts, which include direct, indirect and induced impacts were estimated to be 15,561 jobs with an associated City income of approximately \$337 million in 1986. Total direct, indirect and induced revenues generated by the Port in the City of San Francisco were approximately \$1.2 billion in 1986.

## PORT OF SAN FRANCISCO

### SUMMARY OF ECONOMIC IMPACTS

Impact Category	Direct	Total
-----	-----	-----
Employment	10,328 FTEs	15,561 FTEs
Payroll (\$1,000)	\$224,166	\$337,049
Revenues (\$1,000)	\$776,448	\$1,249,297

Source: Trade Information Planning Systems





*Port of San Francisco  
Economic Impact from  
Port & Port-Related Firms*

*DIRECT*

*TOTAL*

*Employment*     10,328 Jobs     15,561 Jobs



*Payroll*     \$224 Million     \$337 Million



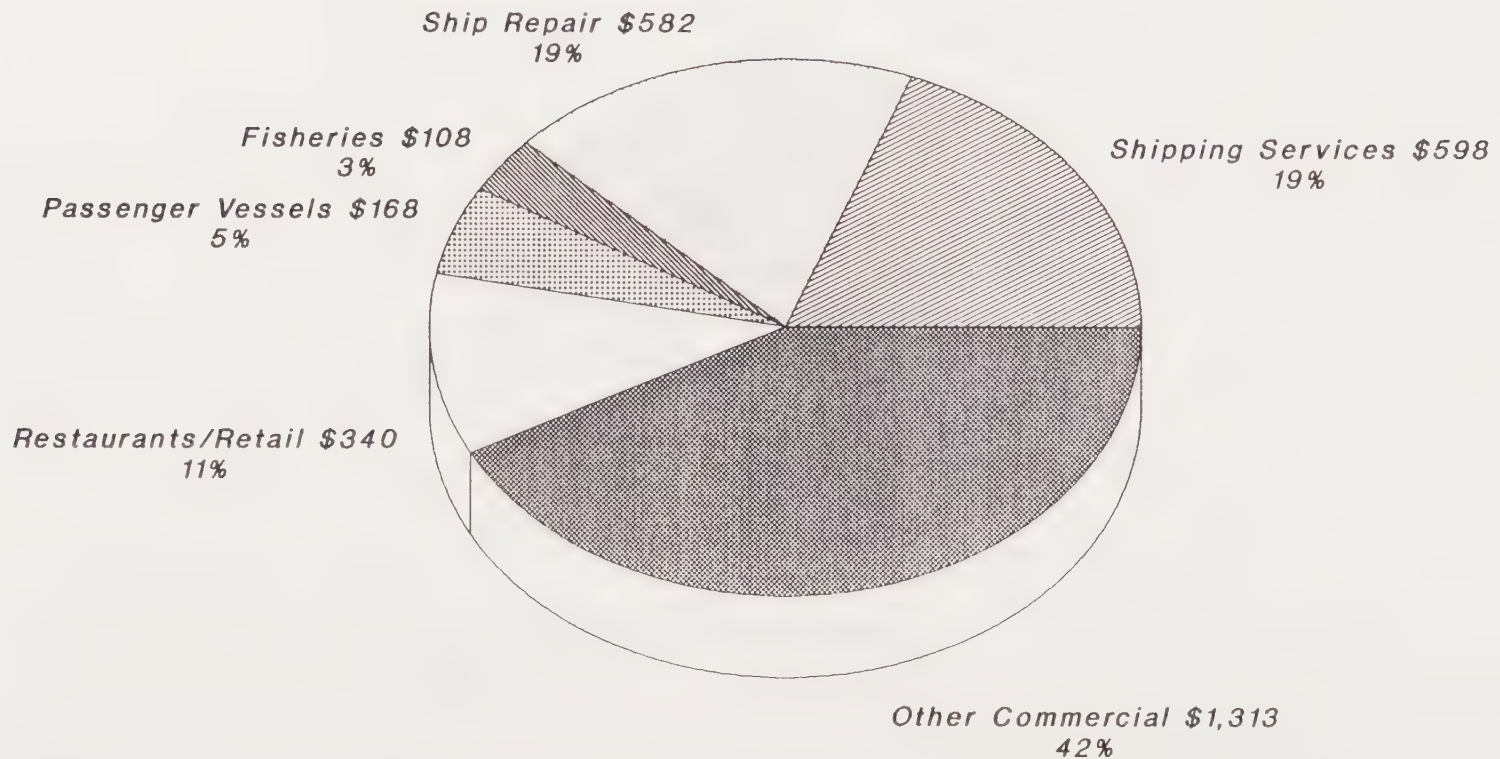
*Revenue*     \$776 Million     \$1.2 Billion



*Source: Trade Information Planning Systems  
based upon 1986 information*



*Port of San Francisco  
Payroll Taxes Generated by  
Port-related Firms (\$ 1,000)  
to City's General Fund  
\$3.1 Million Total*

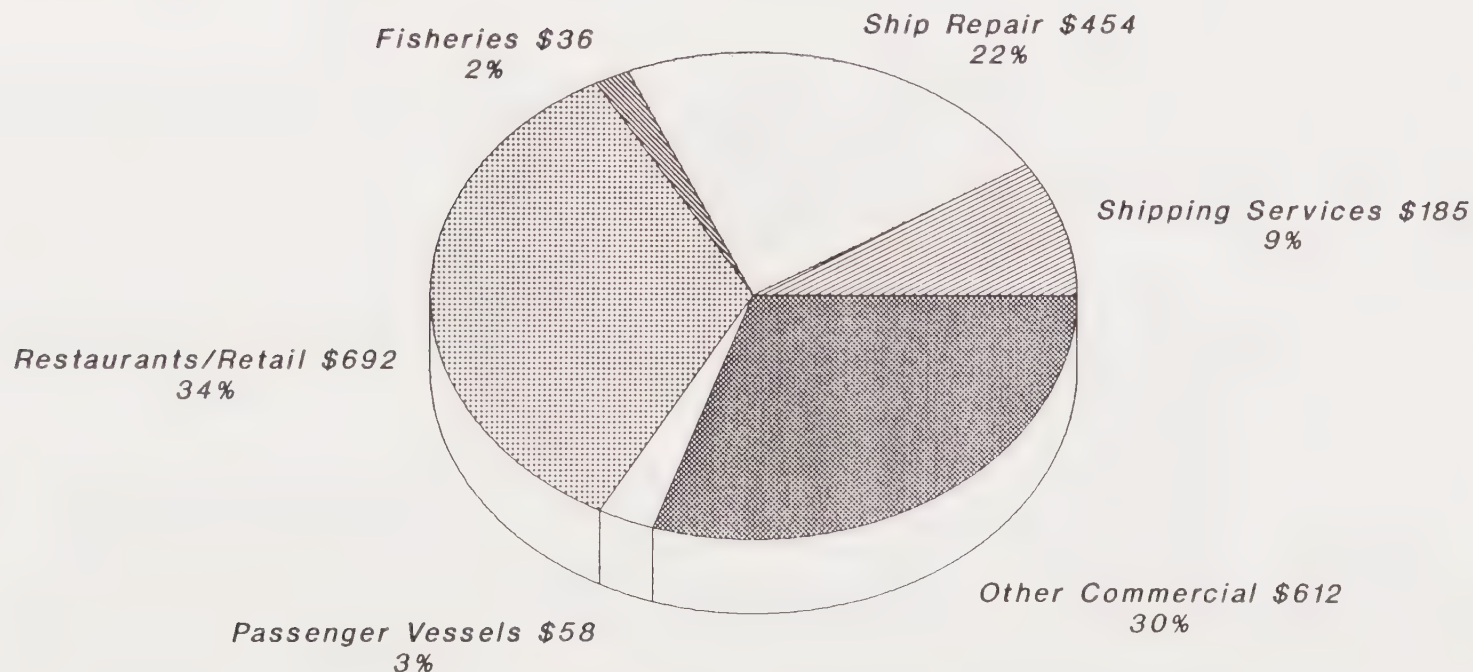


*Source: Trade Information Planning Systems  
based upon 1986 information*





*Port of San Francisco  
Possessory Interest Taxes Generated by  
Port-Related Firms (\$1,000)  
to City's General Fund  
\$2.0 Million*



*Source: Trade Information Planning Systems  
based upon 1986 information*



## SUMMARY OF ECONOMIC IMPACTS BY SECTOR

### EMPLOYMENT

CATEGORY	Direct	%	Total * SF City	%
Shipping Services	1,957	18.9%	3,443	22.1%
Ship Repair	1,271	12.3%	2,123	13.6%
Fisheries	355	3.4%	538	3.5%
Passenger Vessels	603	5.8%	942	6.1%
Retail & Restaurants	2,058	19.9%	2,634	16.9%
Office & Commercial	4,084	39.5%	5,881	37.8%
Total	10,328	100.0%	15,561	100.0%
	=====	=====	=====	=====

### PAYROLL (\$1,000)

CATEGORY	Direct	%	Total * SF City	%
Shipping Services	\$51,175	22.8%	\$85,042	25.2%
Ship Repair	\$39,875	17.8%	\$55,825	16.6%
Fisheries	\$7,570	3.4%	\$12,472	3.7%
Passenger Vessels	\$11,202	5.0%	\$17,479	5.2%
Retail & Restaurants	\$23,755	10.6%	\$33,970	10.1%
Other Commercial	\$90,590	40.4%	\$132,262	39.2%
Total	\$224,166	100.0%	\$337,049	100.0%
	=====	=====	=====	=====

### REVENUES (\$1,000)

CATEGORY	Direct	%	Total * SF City	%
Shipping Services	\$171,806	22.1%	\$275,899	22.1%
Ship Repair	\$148,798	19.2%	\$218,733	17.5%
Fisheries	\$47,954	6.2%	\$86,704	6.9%
Passenger Vessels	\$45,993	5.9%	\$76,721	6.1%
Retail & Restaurants	\$113,592	14.6%	\$184,020	14.7%
Other Commercial	\$248,305	32.0%	\$407,221	32.6%
Total	\$776,448	100.0%	\$1,249,297	100.0%
	=====	=====	=====	=====

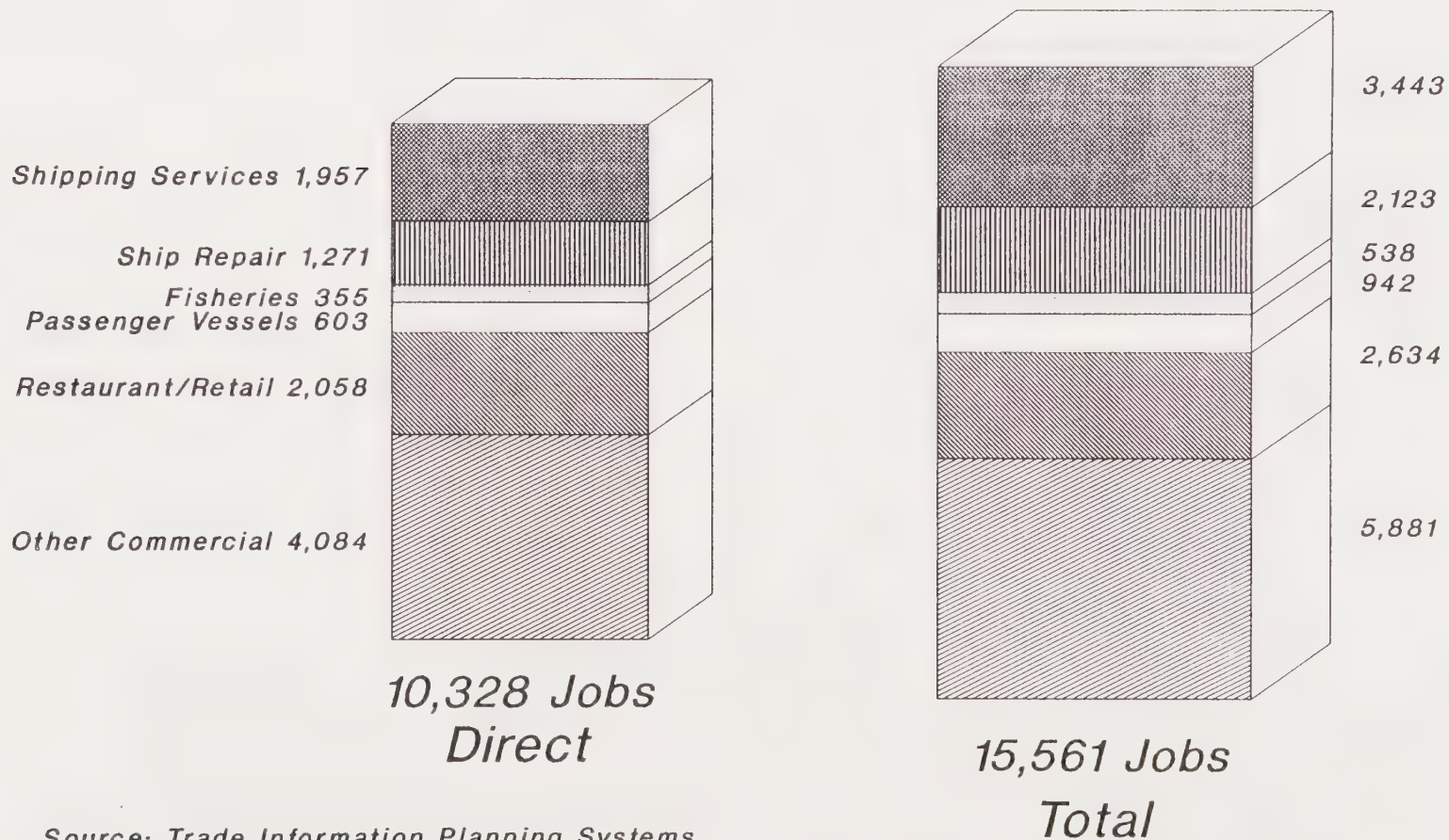
\* Includes direct, indirect and induced impacts

Source: Trade Information Planning Systems





# *Port of San Francisco Employment Generated by Port and Port-Related Firms*

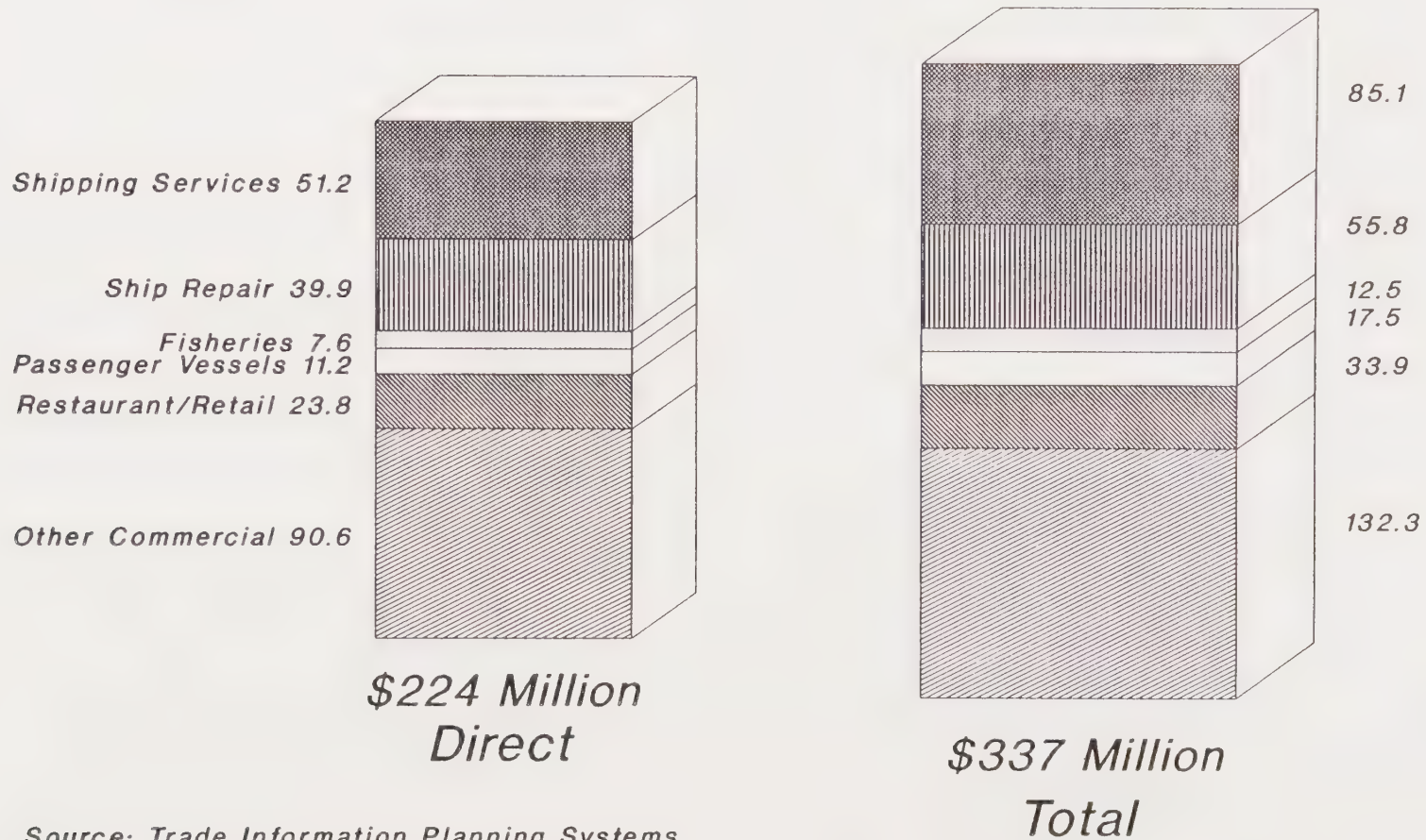


*Source: Trade Information Planning Systems  
based upon 1986 information*



# *Port of San Francisco*

## *Payroll Generated by Port and Port-related Firms (\$ Millions)*



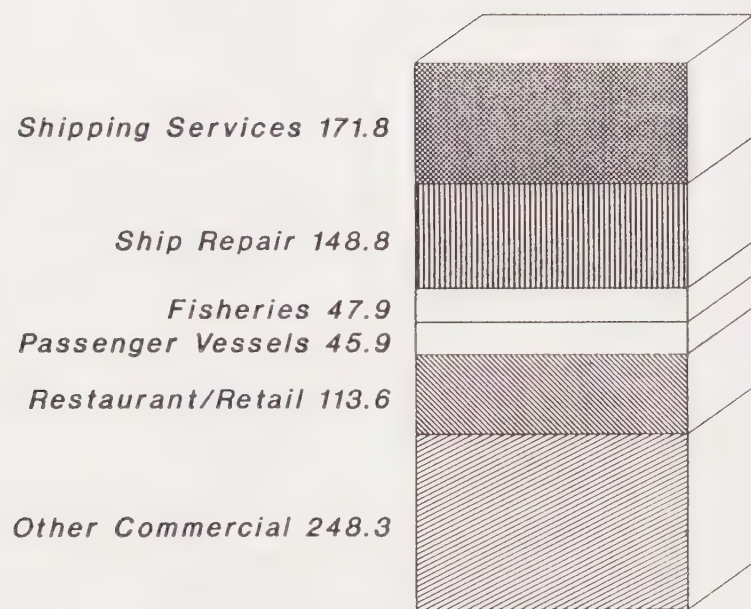
Source: Trade Information Planning Systems  
based upon 1986 information



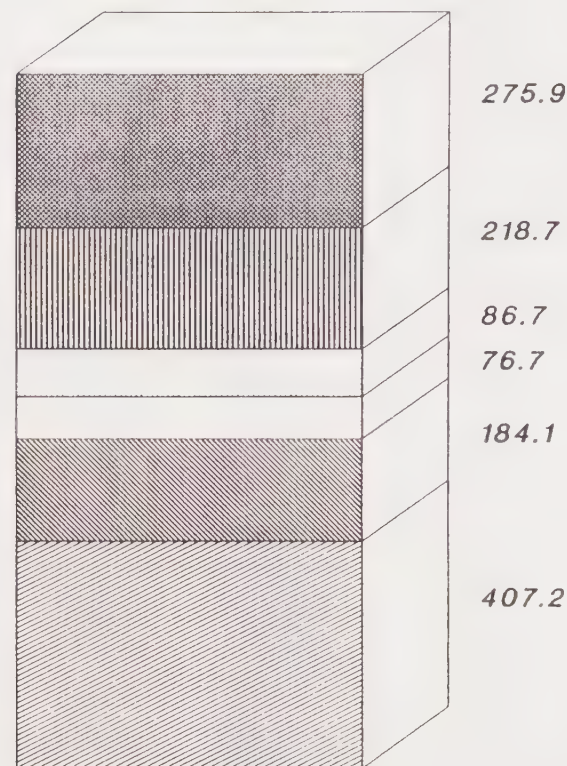


# *Port of San Francisco*

## *Revenue Generated by Port and Port-related Firms (\$ Millions)*



**\$776 Million  
Direct**



**\$1.2 Billion**

**Total**

*Source: Trade Information Planning Systems  
based upon 1986 information*



## SHIPPING SERVICES

Employment related to Shipping Services results from three inter-related activities:

- o transportation services & related activities, including the following subsectors:
  - o Navigational Expenses \*
    - Pilots Charges
    - Tug Assist
  - o Stevedoring & Longshore Charges
  - o Container Stuffing & Warehousing Charges
  - o Inland Transportation & Local Drayage
    - Trucking
    - Rail
  - o Port Charges
  - o Related Governmental Services
  - o Supplies & Bunkers
  - o Minor Repairs
  - o Agency Commissions
  - o Freight Forwarders & Customs Brokers Services
  - o Banking & Insurance Services
- o port capital expenditures
- o port users which are industries that receive or ship a major share of cargo via PORT facilities including:
  - o High technology firms that manufacture electronics, and scientific instruments
  - o Coffee roasting
  - o Newspaper printing
  - o Apparel manufacturing

Shipping Services (including port users) directly create approximately 1,957 jobs with a payroll of approximately \$50 million. Direct revenues to these firms exceed \$172 million. Total impacts are estimated to include approximately 3,443 jobs and City income of \$85 million.

\* Excludes Crew Expenditures



On average, every time a ship calls at the Port it creates approximately 7 full time jobs with a total City income of approximately \$175,000. Every 1,000 metric revenue tons of cargo creates one full time job with an average income exceeding \$29,000.

In addition, shipping services directly generate annual taxes of approximately \$783,000 to the City of San Francisco from just two sources:

o Payroll taxes = \$597,705

o Possessory Interest Tax = \$185,000

The economic impacts of Shipping Services (including port user impacts) are summarized in the following table.

### SHIPPING SERVICES

#### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	1,957 FTEs	3,443 FTEs
Payroll (\$1,000)	\$51,175	\$85,042
Revenue (\$1,000)	\$171,806	\$275,899

Source: Trade Information Planning Systems

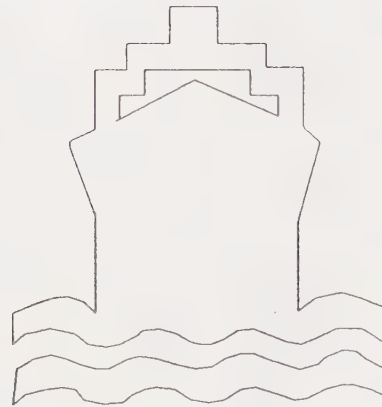




# *Port of San Francisco*

## *Economic Impact from*

### *Shipping Services Sector*



#### *Direct Impacts*

*1,957 Jobs*

*\$51.2 Million Payroll*

*\$171.8 Million Revenue*

#### *Total Impacts*

*3,443 Jobs*

*\$85.0 Million Income*

*\$275.9 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



## SHIP REPAIR

Six ship repair firms operated Port facilities in 1986, including:

- o Continental Maritime Industries
- o General Engineering & Machine Works
- o H & H Ship Service Company
- o Service Engineering Company
- o Southwest Marine Inc.
- o TODD Shipyards

Ship repair firms employed 1,271 FTEs in 1986 with a payroll of approximately \$40 million on revenues of \$149 million. Total City impacts consist of 2,123 jobs with an estimate City income of \$56 million on revenues of \$219 million.

Every \$1 million in ship repair contracts provides 14 new FTE jobs and City income of more than \$375,000. Ship repair firms also generated payroll taxes of \$582,000 and possessory interest taxes of \$454,000 in 1986.

The following table summarizes the economic impacts of the ship repair firms in 1986.

### SHIP REPAIR

#### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	1,271 FTEs	2,123 FTEs
Payroll (\$1,000)	\$39,875	\$55,825
Revenue (\$1,000)	\$148,798	\$218,733

Source: Trade Information Planning Systems



*Port of San Francisco  
Economic Impact from  
Ship Repair Sector*



*Direct Impacts*

*1,271 Jobs*

*\$39.9 Million Payroll*

*\$148.8 Million Revenue*

*Total Impacts*

*2,123 Jobs*

*\$55.8 Million Income*

*\$218.7 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*





## FISHERIES

The fisheries industry in San Francisco consists of three distinct subsectors:

- o Commercial and Historic fishing vessels
- o Charter fishing vessels
- o Fish processors and buyers/handlers.

The fisheries industry creates approximately 355 direct jobs with a payroll exceeding \$7 million and revenues of nearly \$48 million. Total direct, indirect and induced employment from fisheries was approximately 538 persons in 1986 with an associated City income of approximately \$12 million.

Every \$1 million of catch at the Port creates approximately 33 FTE jobs on fishing vessels with an associated City income of \$538,000. The fishing industry also creates \$108,000 in payroll taxes and \$36,000 in possessory interest tax for the City of San Francisco.

The economic impacts of each of these sectors are summarized in the table below.

## FISHERIES

### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	355 FTEs	538 FTEs
Payroll (\$1,000)	\$7,570	\$12,472
Revenue (\$1,000)	\$47,954	\$86,704

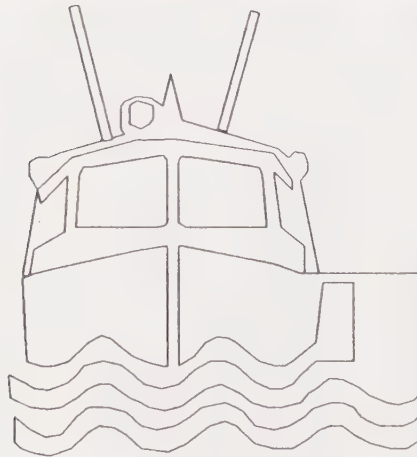
Source: Trade Information Planning Systems



# *Port of San Francisco*

## *Economic Impact from*

### *Fisheries Sector*



#### *Direct Impacts*

*355 Jobs*

*\$7.6 Million Payroll*

*\$47.9 Million Revenue*

#### *Total Impacts*

*538 Jobs*

*\$12.5 Million Income*

*\$86.7 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



## PASSENGER VESSELS

Employment related to Passenger Vessel operations results from three inter-related activities:

- o transportation services & related activities charged against movement of passengers, stores/bunkers and baggage
- o passenger spending while in port
- o ferries and harbor tour cruise lines.

The tourship, local harbor vessels and ferries create a direct economic impact representing more than 600 local fulltime jobs at a payroll exceeding \$11 million and with total revenues of approximately than \$46 million.

Each tourship that calls at the Port generates \$434,500 of direct local revenues and \$1,373,020 of total direct, indirect and induced revenues for the City.

Each passenger that embarks or disembarks the Port creates a total economic impact of more than \$1,800. In addition, employment of 168 persons and payroll of more than \$4 million results from operation of smaller vessels in the area (e.g. Red & White, Blue & Gold, Hornblower Yachts and Exploration Cruise Lines). In addition, tourships generate payroll taxes of approximately \$168,000 and possessory interest taxes of \$58,000 for the City of San Francisco.

The economic impacts generated from passenger vessel activities in 1986 are summarized below.

## PASSENGER VESSELS

### SUMMARY OF ECONOMIC IMPACTS (1986) \*

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	603 FTEs	942 FTEs
Payroll (\$1,000)	\$11,202	\$17,479
Revenue (\$1,000)	\$45,993	\$76,721

\* Excludes cruise lines with offices in San Francisco but which did not have ships calling at the Port in 1986.

Source: Trade Information Planning Systems

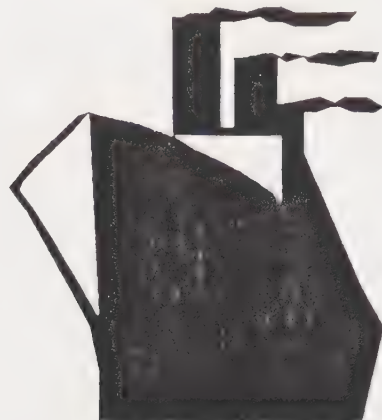




# *Port of San Francisco*

## *Economic Impact from*

### *Passenger Vessels Sector*



#### *Direct Impacts*

*603 Jobs*

*\$11.2 Million Payroll*

*\$46.0 Million Revenue*

#### *Total Impacts*

*942 Jobs*

*\$17.5 Million Income*

*\$76.7 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



## RESTAURANTS & RETAIL SHOPS

There are 49 restaurants, delicatessens, cafes and other eating establishments renting space from the Port. In addition, Pier 39 has an extensive variety of restaurants and retail shops.

Together, these restaurants and retail shops directly employ approximately 2,058 persons on a full time equivalent basis with a payroll of approximately \$24 million on revenues of \$114 million. Total employment is estimated to be 2,634 FTEs with income of approximately \$34 million and revenues of \$184 million.

In addition, restaurants and retail shops located on Port property generated \$340,000 in payroll taxes and \$692,000 in possessory interest taxes for the City of San Francisco.

Every \$1 million in revenues by these firms creates 23 full time jobs and income of \$299,000 in the City of San Francisco.

The economic impacts created by these businesses are summarized below.

### RESTAURANTS & RETAIL SHOPS

#### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	2,058 FTEs	2,634 FTEs
Payroll (\$1,000)	\$23,755	\$33,970
Revenues (\$1,000)	\$113,592	\$184,020

Source: Trade Information Planning Systems





# *Port of San Francisco Economic Impact from Restaurant & Retail Sector*



## *Direct Impacts*

*2,058 Jobs*

*\$23.7 Million Payroll*

*\$113.6 Million Revenue*

## *Total Impacts*

*2,634 Jobs*

*\$34.0 Million Income*

*\$184.0 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



## OFFICE AND OTHER COMMERCIAL FIRMS

In addition to the above sectors, the Port has approximately 944,681 square feet of office space either directly owned by the Port or in buildings which are located on land which is leased from the Port. Most of the firms in these buildings are included in the business service sector.

The economic impact of these firms is estimated to include employment of 4,084 persons with a payroll of \$90 million on revenues of \$248 million. On a City-wide basis, these firms generate a total of 5,881 FTEs with payroll of \$132 million on revenues of \$407 million.

In addition, these firms generated \$1.3 million in payroll taxes and \$612,000 in possessory interest taxes for the City of San Francisco.

Every \$1 million in revenues by these firms creates 24 FTE jobs and a City-wide income of \$562,000.

These impacts are summarized in the following table:

### OFFICE AND OTHER COMMERCIAL FIRMS

#### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	4,084 FTEs	5,881 FTEs
Payroll (\$1,000)	\$90,590	\$132,262
Revenue (\$1,000)	\$248,305	\$407,221

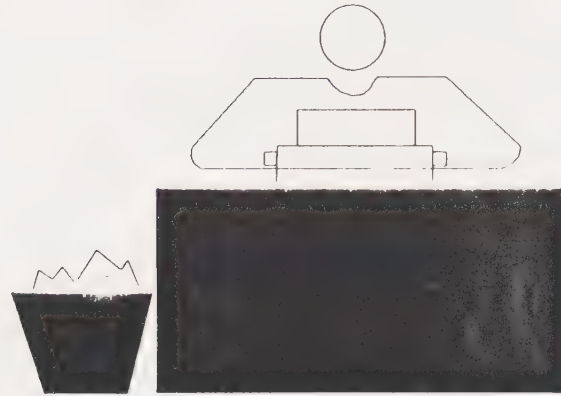
Source: Trade Information Planning Systems



# *Port of San Francisco*

## *Economic Impact from*

### *Office & Other Commercial Sector*



#### *Direct Impacts*

*4,084 Jobs*

*\$90.6 Million Payroll*

*\$248.3 Million Revenue*

#### *Total Impacts*

*5,881 Jobs*

*\$132.3 Million Income*

*\$407.2 Million Revenue*

*Source: Trade Information Planning Systems*

*based upon 1986 information*





***CHAPTER ONE***  
***SHIPPING SERVICES***



# CHAPTER ONE

## SHIPPING SERVICES ECONOMIC IMPACTS

### INTRODUCTION

Employment related to Port terminal operations results from three inter-related activities:

- o transportation services & related activities , including:
  - o Navigational Expenses
    - Pilots Charges
    - Tug Assist
  - o Stevedoring & Longshore Charges
  - o Terminal Charges
  - o Container Stuffing & Warehousing
  - o Inland Transportation & Local Drayage
    - Trucking
    - Rail
  - o Port Charges
  - o Related Government Service Charges
  - o Supplies & Bunkers
  - o Minor Repairs
  - o Agency Commissions
  - o Freight Forwarders & Customs Brokers
  - o Banking & Insurance
- o port capital expenditures (e.g. short-term construction employment, payroll and sales).
- o port users (e.g. industries that receive or ship a major share of cargo via PORT facilities. These include:
  - o High Technology Industries (including office equipment, data processing, telecommunications and manufacture of instruments and professional equipment)
  - o Coffee roasting
  - o Newspaper printing
  - o Apparel Manufacturing

The economic impacts of shipping services (including port user impacts) is summarized below.



## SHIPPING SERVICES

### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	1,957 FTEs	3,443 FTEs
Payroll (\$1,000)	\$51,175	\$85,042
Revenue (\$1,000)	\$171,806	\$275,899

*Source: Trade Information Planning Systems*

The following analysis on employment, payroll and revenues concentrates on shipping services and related activities. First, cargo operation impacts are presented with a focus on each type of cargo handling. Second, capital expenditure impacts are highlighted and finally, port user impacts are presented.

### CARGO OPERATION IMPACTS

Direct Employment attributable to Port operations was 1,072 FTEs. The direct, indirect and induced employment was 3,428 FTEs in 1986.

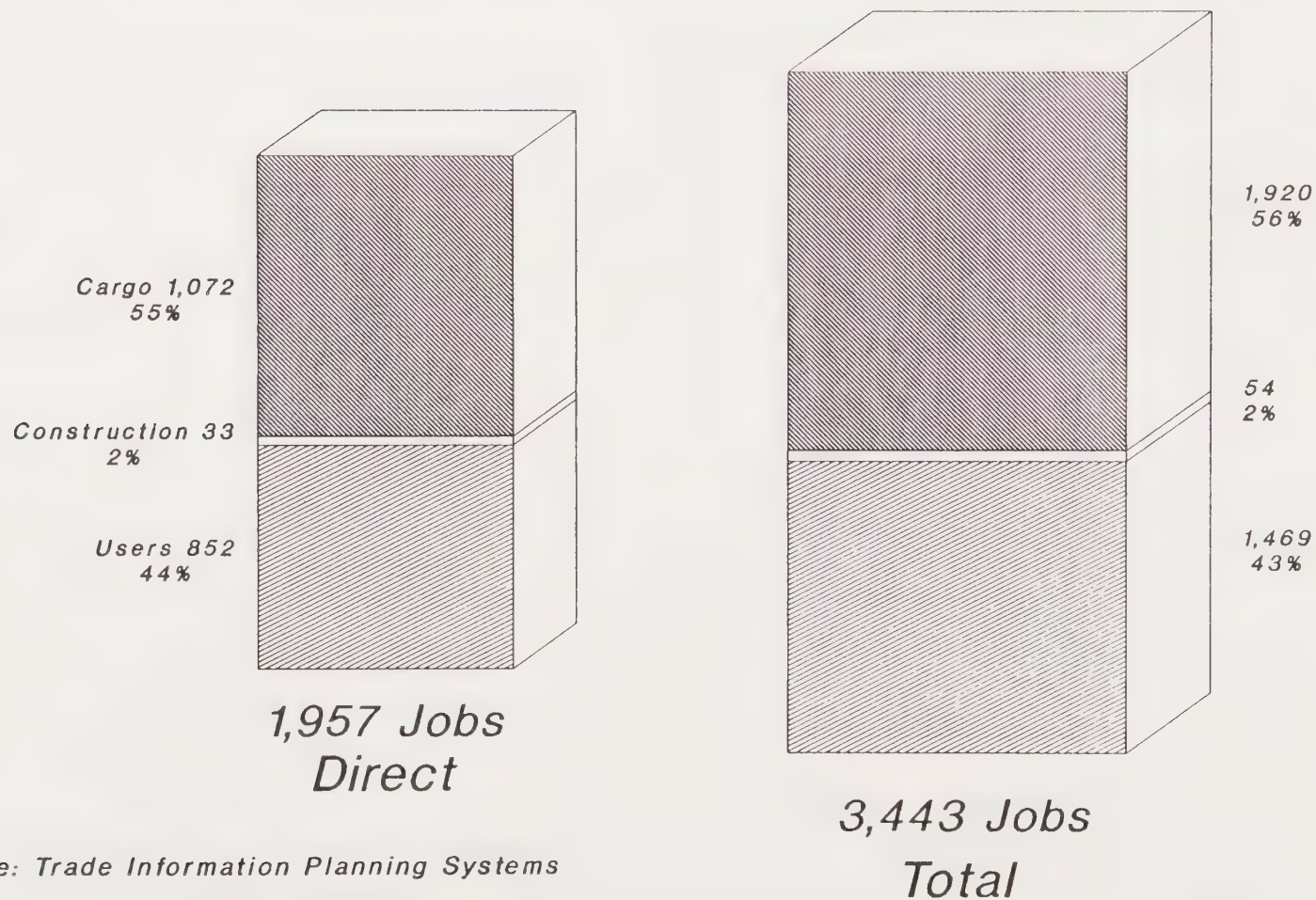
#### Multiplier Impact

Employment in 1986	
Full Time Employment	1,072 FTEs
Multiplier	x 1.790
	-----
Direct, Indirect & Induced Employment	1,919 FTEs





# *Port of San Francisco Employment Generated by Shipping Services Sector*



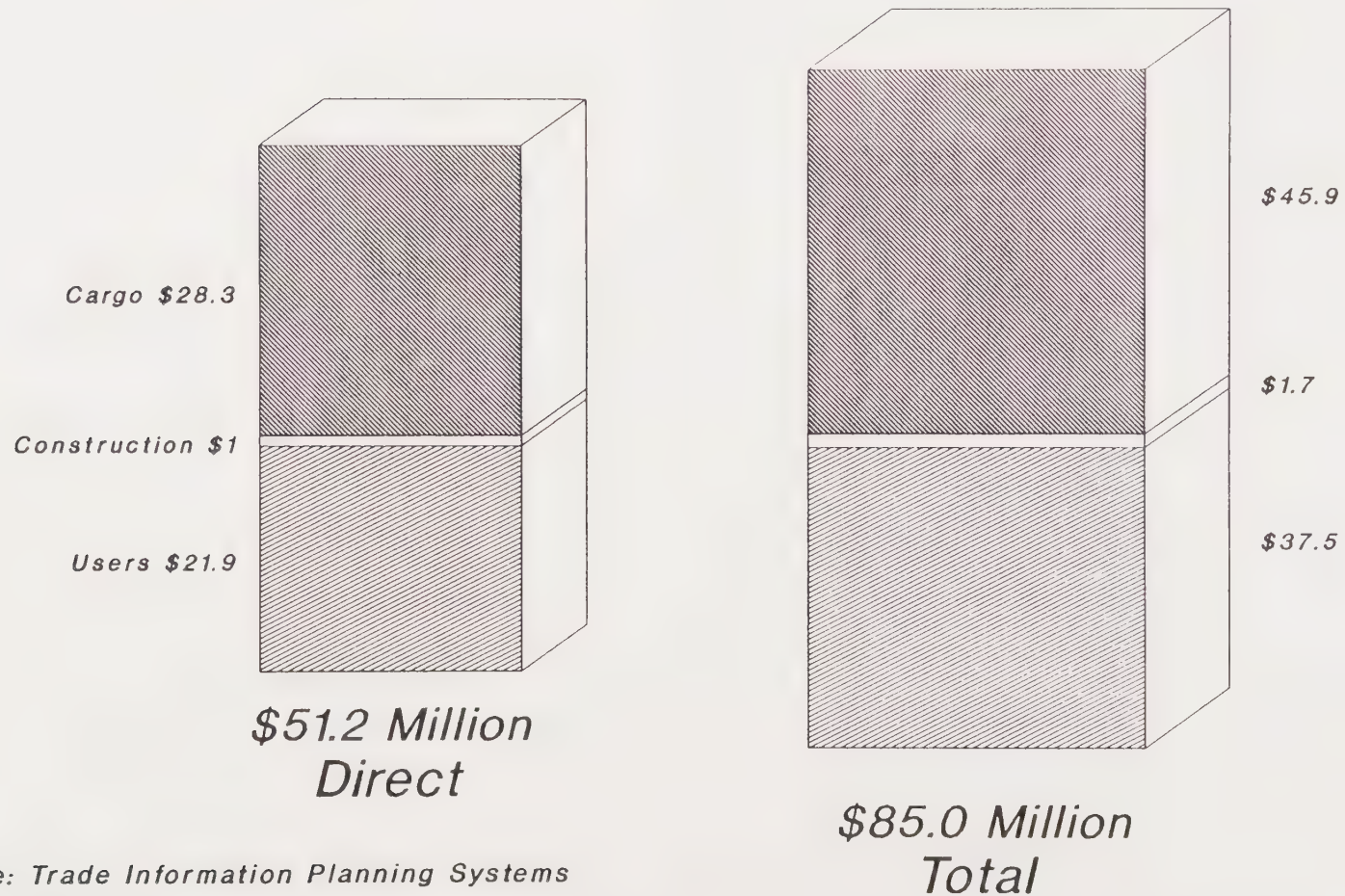
*Source: Trade Information Planning Systems  
based upon 1986 information*



# *Port of San Francisco*

## *Payroll Generated by*

### *Shipping Services Sector (\$ Millions)*



Source: Trade Information Planning Systems  
based upon 1986 information

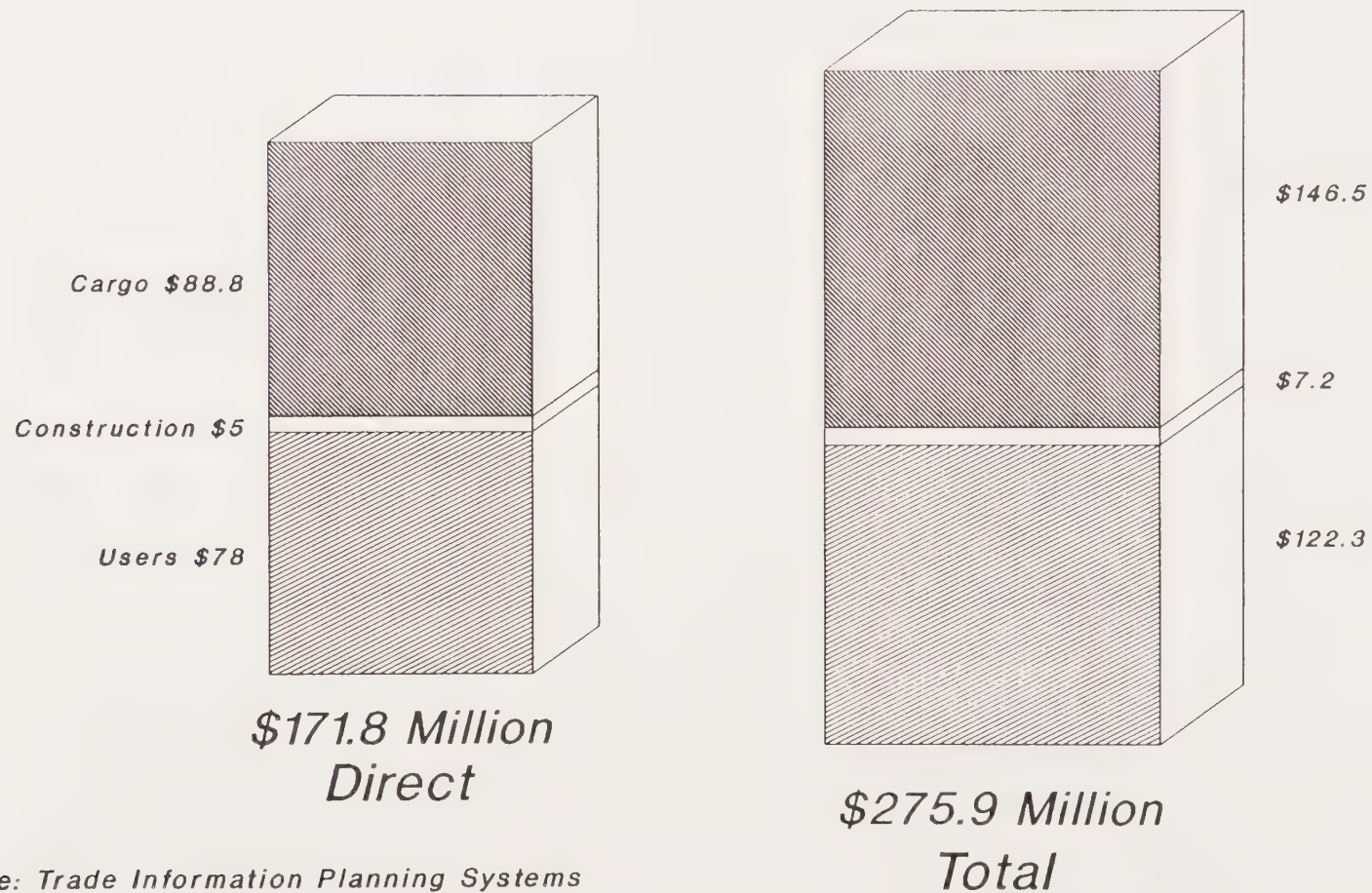




# *Port of San Francisco*

## *Revenue Generated by*

### *Shipping Services Sector (\$ Millions)*



*Source: Trade Information Planning Systems  
based upon 1986 information*





Employment associated with shipping services by handling group is summarized below.

### *ESTIMATED EMPLOYEES BY CARGO HANDLING GROUP*

Category	CONTAINERS	B/B	AUTO	BULKS	TOTAL
.....	.....	.....	.....	.....	.....
Navigational Services (1,2)	30	0	3	4	38
Stevedoring/Longshore (3,4,5)	118	32	14	4	167
Container Stuffing &					
Warehousing (6)	21	4	0	0	25
Inland Trans & Dray (7)					
Trucking	185	67	0	0	252
Rail Dray	31	0	0	0	31
Rail Movements	22	0	0	0	22
Port (8)	59	9	1	5	74
Other Government (9)	79	13	1	7	100
Supplies & Bunkers (10)	4	0	0	1	5
Minor Repairs (11)	7	1	1	1	10
Agency Commissions (12)	112	36	1	0	149
Frght Forw & Cust Brkrs (13)	83	24	2	2	111
Banking & Insurance (14)	71	11	1	6	90
TOTAL	821	197	23	30	1,072

*Source: Trade Information Planning Systems*



Gross Payroll (excluding fringe benefits) in 1986 for shipping services totalled \$28,320,000. The average salary per employee was \$26,418.

Direct payroll taxes were estimated at \$382,320. The Port's cargo also generated Customs Duties of \$59,979,000 in 1986.

Total impact (i.e. direct, indirect and induced income) resulting from shipping services was \$45,878,000.

Direct Payroll Taxes in 1986	=	\$28,320,000
		x 60% (local, Non-Government jobs)
		x 1.5%
		-----
		\$254,880

Multiplier Impact Payroll	=	\$28,320,000
Multiplier		x 1.62
		-----

Direct, Indirect & Induced Payroll		\$45,878,000
---------------------------------------	--	--------------

#### ESTIMATED PAYROLLS BY CARGO HANDLING GROUP

Category	CONTAINERS	B/B	AUTO	BULKS	TOTAL
.....					
Navigational Services (1,2)	\$2,097	\$30	\$196	\$296	\$2,291
Stevedoring/Longshore (3,4,5)	\$3,024	\$802	\$362	\$94	\$4,282
Container Stuffing & Warehousing (6)	\$520	\$111	\$0	\$0	\$631
Inland Trans & Dray (7)					
Trucking	\$4,122	\$1,495	\$0	\$0	\$5,617
Rail Dray	\$687	\$0	\$0	\$0	\$687
Rail Movements	\$676	\$0	\$0	\$0	\$676
Port (8)	\$1,969	\$316	\$24	\$174	\$2,483
Government (9)	\$1,983	\$318	\$24	\$176	\$2,500
Supplies & Bunkers (10)	\$99	\$1	\$9	\$14	\$124
Minor Repairs (11)	\$215	\$30	\$20	\$30	\$296
Agency Commissions (12)	\$2,808	\$890	\$25	\$7	\$3,730
Frght Forw & Cust Brkrs (13)	\$2,080	\$594	\$45	\$44	\$2,763
Banking & Insurance (14)	\$1,776	\$285	\$21	\$157	\$2,240
TOTAL	\$22,057	\$4,872	\$726	\$993	\$28,320

---

Source: Trade Information Planning Systems



Annual direct revenues in 1986 from shipping services was \$88,772,000. Total direct, indirect and induced revenues are estimated to be \$146,474,000.

### Multiplier Impact

Revenues in 1986

Shipping services \$88,772,000

Multiplier x 1.650

-----  
Direct, Indirect & Induced Revenues \$146,474,000

### ESTIMATED REVENUES BY CARGO HANDLING GROUP

Category	CONTAINERS	B/B	AUTO	BULKS	TOTAL
.....	.....	.....	.....	.....	.....
Navigational Services (1,2)	\$3,017	\$43	\$281	\$426	\$3,356
Stevedoring (3,4,5)	\$13,832	\$8,162	\$532	\$96	\$22,622
Container Stuffing & Warehousing (6)	\$2,080	\$445	\$0	\$0	\$2,525
Inland Trans & Dray (7)					
Trucking	\$11,778	\$4,271	\$0	\$0	\$16,049
Rail Dray	\$1,963	\$0	\$0	\$0	\$1,963
Rail Movements	\$1,300	\$0	\$0	\$0	\$1,300
Port (8)	\$4,302	\$690	\$52	\$381	\$5,425
Government (9)	\$6,609	\$1,059	\$80	\$585	\$8,333
Supplies & Bunkers (10)	\$6,195	\$88	\$578	\$875	\$7,735
Minor Repairs (11)	\$538	\$76	\$50	\$76	\$740
Agency Commissions (12)	\$4,680	\$1,484	\$42	\$11	\$6,217
Frght Forw & Cust Brkrs (13)	\$5,200	\$1,484	\$112	\$111	\$6,907
Banking & Insurance (14)	\$4,441	\$712	\$54	\$393	\$5,600
TOTAL	\$65,936	\$18,513	\$1,781	\$2,954	\$88,772

---

Source: Trade Information Planning Systems





## PORT CAPITAL EXPENDITURES

The Port spends an average of \$5 million per year on capital expenditures related to marine terminal operations. As shown below, the majority of these expenditures are for construction of piers, equipment purchase and dredging.

Category	Average Expenditure *
Land Purchase	\$0
Landfill	\$250,000
Paving	\$500,000
Buildings	\$500,000
Piers	\$1,500,000
Dredging	\$1,000,000
Equipment	\$1,250,000
Total	\$5,000,000

\* Represents a three year average for years 1984 through 1986.

Source: Port of San Francisco

Port capital expenditures create a direct FTE employment base of 33 workers and a payroll of approximately \$1 million per year.

Capital Expenditures	Revenues	Payroll	Employment
Direct Impact	\$5,000,000	\$1,000,000	33
SF City Multipliers	1.43	1.66	1.62
Total City Impact	\$7,150,000	\$1,660,000	54

Source: Trade Information Planning Systems



## PORT USERS

"Local port user impact refers to the revenues, employment, payroll and taxes generated by industries which make heavy use of the port for shipping their products or receiving their inputs" (Source: Port Economic Impact Kit, US Department of Transportation, Maritime Administration). These local port users are considered as "dependent" upon the port if the existence of the port was a major factor in their choice to locate in the local area or if the firm derives an economic advantage by using one port over another.

These local port users include, therefore, both importers and exporters. Exporters dependence upon a port is easier to identify than importers. For exporters, the percentage of revenue that is exported by water as opposed to export by other means or domestic revenues (which do not require waterborne transportation) identifies the percentage of dependency upon the port. The export dependent industries in the Port of San Francisco include:

- o High Technology Firms (Office Equipment & Data Processing Firms and Manufacturers of Instruments and Professional Equipment)

The High technology firms in the Bay Area are estimated to ship approximately 10% of their revenues volume by water (Source: Golden Gates Port Association). These firms have a combined employment totaling 179,000 full time employees. The City of San Francisco has employment of 300 individuals in the manufacture of electrical and electronic equipment and 900 individuals in the manufacture of scientific instruments and professional equipment. This is, therefore, a conservative estimate of the impact of Port operations on the high technology industry in the Bay Area region.



Within the San Francisco Customs District, the Port has approximately one quarter of the waterborne exports of high technology goods:

Code	Description	\$ Value (Mils)	% of Bay Area Waterborne Trade
75	Office Machines	\$131.9	26.8%
77	Electric Equip	\$ 82.3	26.0%
76	Telecommun Equip	\$ 76.6	27.5%
	Total High Tech	\$290.8	26.8%

*Source: Trade Information Planning Systems*

Importers are a more difficult category of port user. An import based facility receives commodities which fit into the production process. "A plant depending upon waterborne inputs is an incremental economic activity in the local area, closely tied to the port. Such an industry should be considered as a local port user" (Source: Port Economic Impact Kit). San Francisco has three such import users:

- o Coffee roasting manufactures
- o Apparel Manufactures
- o Printing (specifically newspaper printing)

Within the San Francisco Customs District, the Port of San Francisco has the following share of waterborne imports in the Bay Area:

Code	Description	\$ Value (Mils)	% of Bay Area Waterborne Trade
07	Coffee, Cocoa	\$719.6	60.8%
64	Paper, Paperboard	\$265.6	65.2%
65	Yarn, Fabric	\$ 69.1	17.2%
	Total Major Imports	\$1,054.3	

*Source: Trade Information Planning Systems*





### PORT USERS - DIRECT IMPACTS

Firm Type	Employees	Payroll	Revenues
High Tech	120	\$3,814	\$12,712
Coffee	120	\$3,600	\$12,000
Apparel Manufacture	247	\$3,686	\$17,470
Printing	365	\$10,756	\$35,852
	---	-----	-----
TOTAL	852	\$21,855	\$78,034
	===	=====	=====

### PORT USERS - TOTAL EMPLOYMENT

Industry	Direct	Multiplier	Total
High Tech	120	1.580	190
Food	120	2.010	241
Apparel Manufacture	247	1.310	324
Printing	365	1.960	715
	---		-----
Total	852		1,469
	===		=====

### PORT USERS - TOTAL PAYROLL

Industry	Direct (\$1,000)	Multiplier	Total (\$1,000)
High Tech	\$3,814	1.450	\$5,530
Food	\$3,600	1.880	\$6,768
Textiles	\$3,686	1.440	\$5,308
Newspapers	\$10,756	1.850	\$19,898
	-----	-----	-----
Total	\$21,855	1.716	\$37,504
	=====	=====	=====

### PORT USERS - TOTAL REVENUE

Industry	Direct (\$1,000)	Multiplier	Total (\$1,000)
High Tech	\$12,712	1.510	\$19,195
Food	\$12,000	1.400	\$16,800
Textiles	\$17,470	1.450	\$25,331
Newspapers	\$35,852	1.700	\$60,949
	-----	-----	-----
Total	\$78,034	1.567	\$122,275
	=====	=====	=====



## *Summary of Individual Economic Impact Categories*

### *1. Pilot charges for Navigation*

The San Francisco Bar Pilot's Association office is located on Port property. Total employment at the SF Bar Pilot's office is 23 FTEs with an annual payroll of \$562,000. Average payroll is approximately \$24,500. There are also approximately 18 additional employees elsewhere that support Port operations. These employees create an additional payroll of \$435,000. In addition, the pilots receive an average salary exceeding \$85,000 per year.

Bar Pilot's annual revenues in 1986 were slightly more than \$8,000,000. Approximately \$2,700,000 or 33% of these total annual revenues came from operations attributable to Port operations.

The summary of the direct impact from Pilot operations attributable to Port operations is presented below.

#### *Attributable to Port*

Employment	22 FTEs
Payroll	\$1,831,410
Revenues	\$2,700,000

### *2. Tug Assist Charges*

Tug assist services in the Bay Area are provided by four firms. The average tug assist charge is \$1,200 which consists of an average four hour operation. Port operations generated revenues of \$1,060,800 to tug assist firms.

The average payroll for tug assist operation (including both shoreside personnel and crew) is \$40,000. Port operations created \$459,326 in payroll and 11 FTEs in direct employment in tug assist services.

#### *Attributable to Port*

Employment	11 FTEs
Payroll	\$459,326
Revenues	\$1,060,800



### 3. Stevedore Charges

In addition to longshore labor costs, stevedore companies also have internal payrolls, equipment charges and like charges to provide cargo handling services.

The Stevedore firms operating at Port operations have the following employee costs:

Operation	Employees	Est Payroll
-----	-----	-----
Container		
o SSA	15	\$339,345
o CS&B	10	\$226,230
	--	-----
Sub-Total	25	\$565,575
 Breakbulk		
o MTC	10	\$226,230
o Star Terminals	6	\$135,738
o Forest	4	\$ 90,492
	--	-----
Sub-Total	20	\$452,460
 Other	7	\$281,965
 Total	52	\$1,300,000

Further, it is estimated that Stevedore firms at the Port have a combined total revenue of \$22,621,500.

### 4. Longshore Lines Handling

Lines handling (both tie-up and cast-off) for all cargo vessels (excluding barges) is performed by longshoremen with the following standard agreements:

Time Period	Minimum Callout*
-----	-----
6am to 8pm (Mon - Sat)	2 hours
 8pm to 6am (Evenings and Sunday)	 4 hours

\* Vessel arrival time periods control manning requirements



The normal procedure is 6 men to tie-up and 4 to cast off. Local Stevedore firms estimate that approximately 80% of vessels call in the 2 hour period while 20% call when the 4 hour minimum is guaranteed.

As shown below, Port operations generated \$209,843 in direct longshore wages (excluding benefits) in 1986. This translated to approximately 9 FTE positions (assumes \$25,199 per year per longshoreman in 1986 based upon PMA documentation).

#### *Attributable to Port*

Employment	9 FTEs
Payroll	\$209,843

#### *5. Cargo Handling*

Longshore work is also created in handling of cargo at various locations in and around the Port depending upon the cargo handled:

- o Longshoremen moving cargo from the vessel to dock
- o Longshoremen moving cargo in the yard

The following cargoes are included in the analysis:

- o Automobiles
- o Containers
- o Breakbulk (e.g. newsprint)
- o Bulk (e.g. dry bulks)

#### *Automobile Vessel:*

Manning is as follows:

- o Auto Drivers as required by number of autos ranges from 20 to 150 per 8 hour shift. Average is assumed to be 30.

- o Winch Drivers = 2 (8 hours)
- o Lashers = 2 to 14 (8 hours) Average assumed to be 6
- o Supercargo = 1 (10 hours)
- o Deck Supervisor = 1 (10 hours)
- o Walking bosses = 2 to 6 (12 hours) Average assumed to be 2





*Attributable to Port*

Employment	9 FTEs
Payroll	\$326,208

*Container Operations:*

Manning is as follows for various types of terminal operations:

Container - Piggypacker operation

Supercargo = 1 (10 hours)

Per Crane:

Walking Boss	= 1 (12hours)
Strads	= 2 to 6 (8)
Crane Drivers	= 2 (8.5 to 9.5 hours)
Lashers	= 4 to 30 (8 hours)
Clerk	= 1 (8 hours)

*Attributable to Port*

Employment	83 FTEs
Payroll	\$2,155,860

*Breakbulk [Newsprint]*

Supercargo = 1 (10 hours)

Per Gang:

Walking Boss (ship)	= 1 (12hours)
Walking Boss (dock)	= 1 (12hours)
Gang Boss	= 1 (8 hours)
Clerk	= 1 (8 hours)
Lift Driver	= 1 (8 hours)
Holdmen	= 6 (8 hours)
Winch Driver	= 1 (8 hours)
Hatch Tender	= 1 (8 hours)
Front men	= 2 (8 hours)



Breakbulk employment reported by various terminals is:

Employees		
Terminal	Yard/Operations per day	Annual Estimate
MTC	7	6 FTE
Star	4	4 FTE
Forest	4	4 FTE
	---	---
Total	15	14 FTE

*Attributable to Port*

Employment	12 FTES
Payroll	\$300,000

*6. Container Stuffing & Warehousing*

Several on-dock and off-dock container freight stations (CFS) and warehouses exist around the Port, where cargo is sorted, resorted and shipped to final destination. Approximately 40% of containerized and breakbulk cargoes utilize this service.

*Attributable to Port*

Employment	20 FTES
Payroll	\$501,300
Revenue	\$2,525,200

*7. Inland Transportation and Drayage*

Drayage and inland transportation represent a sizable local expenditure by firms engaged in port operations.

*a. Trucking*

Approximately 75% of cargo moving through the Port is drayed by truck to its intermediate or final destination. Of this cargo, approximately 20% remains in the City of San Francisco while the rest is mainly distributed across the Bay.

*Attributable to Port*

Employment	252 FTES
Payroll	\$5,617,248
Revenue	\$16,049,280



## b. Rail Drayage

It is estimated that approximately 20% to 25% of cargo moving through the Port terminals is rail intermodal cargo bound outside of the Port's primary market area (defined as Northern California for the purposes of this report). Most of this cargo is drayed to the Southern Pacific intermodal yard.

### *Attributable to Port*

Employment	31 FTES
Payroll	\$687,050
Revenue	\$1,963,000

## c. Rail Movements

Railroad employment is created by both rail movements loaded in San Francisco as well as direct line haul movements.

### *Attributable to Port*

Employment	22 FTES
Payroll	\$676,000
Revenue	\$1,300,000

## 8. Port Charges

The carrier generally pays the Port tariffs including wharfage, dockage, crane rental and other related Port charges. The following estimates are based upon the percentage of cargo revenues to total Port revenues.

### *Attributable to Port*

Employment	74 FTES
Payroll	\$2,482,962
Revenue	\$5,425,000





## 9. Government Services

Approximately 100 government employees (other than Port employees) provide regulatory and other services to assist shipping services. These government employees include:

- o US Army Corps of Engineers - Dredging and regulatory
- o US Coast Guard - Vessel navigation & safety
- o USDA - regulatory
- o US Customs - regulatory
- o Cal State Department of Agriculture
- o others

### *Attributable to Port*

Employment	100 FTES
Payroll	\$2,500,000
Revenue	\$8,333,333

## 10. Supplies & Bunkers

The average vessel call in San Francisco Bay is estimated to buy stores and bunkers of approximately \$70,000 per vessel call (source: TBS 1981 PMSA Study). Approximately 25% of vessels calling the Port bunker in the Bay Area.

This creates the following local expenditures:

### *Attributable to Port*

Employment	5 FTES
Payroll	\$123,760
Revenue	\$7,735,000



## *11. Maintenance and Repairs*

Ship Repair firms in San Francisco Bay Area have estimated that approximately 5% of total revenues come from minor repairs to cargo vessels (e.g. emergency repairs). For San Francisco based ship repair firms this represents approximately \$5 million.

### *Attributable to Port*

Employment	10 FTEs
Payroll	\$296,080
Revenues	\$740,199

## *12. Steamship Agency Commissions*

Steamship agency employees totaled 1,033 with a payroll of \$43,919,000 in 1984 (County Business Patterns 1984). These 1984 employment levels were updated to 1986 dollars using the GNP price deflator index for services. Approximately 10% of the total number of employees supported Port operations.

### *Attributable to Port*

Employment	149 FTEs
Payroll	\$3,730,230
Revenues	\$6,217,050



### *13. Freight Forwarders and Customs House Brokers*

The average rate per transaction for customs broker and freight forwarders is estimated to be \$50 per TEU. The average rate for breakbulk cargoes approximately \$2.00 per ton.

#### *Attributable to Port*

Employment	111 FTEs
Payroll	\$2,762,600
Revenues	\$6,906,500

### *14. Banking & Insurance*

It is estimated that banking and insurance charges relating to importing and exporting is \$26.38 per TEU.

#### *Attributable to Port*

Employment	90 FTEs
Payroll	\$2,240,000
Revenues	\$5,600,000



*CHAPTER TWO*  
*SHIP REPAIR*





## CHAPTER TWO

### SHIP REPAIR

### INTRODUCTION

Six ship repair firms operated at Port facilities in 1986, including:

- o Continental Maritime Industries
- o General Engineering & Machine Works
- o H & H Ship Service Company
- o Service Engineering Company
- o Southwest Marine Inc.
- o TODD Shipyards

The following table summarizes the economic impacts of the ship repair firms in 1986.

#### SHIP REPAIR ECONOMIC IMPACTS

##### SUMMARY OF ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	1,271 FTEs	2,123 FTEs
Payroll (\$1,000)	\$39,875	\$55,825
Revenue (\$1,000)	\$148,798	\$218,733

---

Source: Trade Information Planning Systems



# *Port of San Francisco*

## *Economic Impact from*

### *Ship Repair Sector*



#### *Direct Impacts*

*1,271 Jobs*

*\$39.9 Million Payroll*

*\$148.8 Million Revenue*

#### *Total Impacts*

*2,123 Jobs*

*\$55.8 Million Income*

*\$218.7 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



An addition of \$1 million in ship repair contracts would create the following impacts in direct shipyard employment:

<i>Category</i>	<i>Direct Impact</i>	<i>Direct, Indirect &amp; Induced Impact</i>
Employment	9 FTEs	15 FTEs
Payroll (\$1,000)	\$267	\$374
Revenue (\$1,000)	\$1,000	\$1,470

Source: Trade Information Planning Systems

San Francisco ship repair firms contribute a substantial economic input to the City from their purchase of goods and services. These firms are estimated to spend nearly 80% of the cost of business in San Francisco. As a consequence, nearly all of the indirect (e.g. inter-industry) impacts of ship repair remain in San Francisco.

#### EMPLOYMENT IN 1986

Ship repair firms in San Francisco had an estimated direct employee force of 1,240 full time equivalent (FTEs) employees in 1986. In addition, allocating Port staff by revenue share of total revenues generates an additional 31 employees.

San Francisco ship repair firms are largely dependent on the military for contracts. The average value of contracts for the past three years from military sources equals approximately 86% of total Bay Area ship repair contracts.

	<u>Military</u>	<u>Commercial</u>
Weighted Average	86%	14%
	=====	=====

Obviously, the future of ship repair operations in San Francisco is closely linked to the future of the military contracts.

Because the average wage in ship repair is much higher than in most other occupations (\$31,000+), the multiplier impact from direct employment in ship repair is relatively higher compared to other sectors.





It is estimated that each job in ship repair creates an additional 1.67 jobs in the City of San Francisco. Therefore, total direct, indirect and induced employment from ship repair operations in San Francisco was 2,071 employees.

An addition of \$1 million in sales contracts could generate 9 direct and 6 indirect/induced jobs in the City for a total impact of 15 jobs.

#### CALCULATIONS

Full time Employment in	=	1,240 FTEs
Port Staff Allocation	=	31 FTEs
		-----
Total Employment		1,271 FTEs
		=====
Multiplier Impact		
Employment in 1986		1,271 FTEs
Multiplier		x 1.67
		-----
Direct, Indirect & Induced Employment		2,123 FTEs

#### PAYROLL IN 1986

The ship repair industry created an estimated annual payroll of \$38,837,438 in 1986. In addition, payroll associated with the 31 allocated Port staff is \$1,038,737.

The existing direct shipyard payroll base created payroll taxes for the city estimated at \$582,562 in 1986.

Every dollar of payroll in the ship repair sector in the City of San Francisco is estimated to generate \$1.40 in direct, indirect and induced household income. The full impact of the 1986 ship repair payroll is therefore estimated to be more than \$54.3 million.



## CALCULATIONS

Full Time Payroll	=	\$38,837,438
Port Staff Allocation	=	\$1,038,737
		-----
Total Employment		\$39,876,175
		=====

Average FTE Payroll per employee = \$31,000

Direct Payroll Taxes in 1986		
Payroll	=	\$38,837,438
		x 1.5%
		-----
		\$582,562

### Multiplier Impact

Revenues in 1986	\$39,876,175
Multiplier	x 1.40
	-----
Direct, Indirect & Induced Income	\$55,826,645

## REVENUES IN 1986

Ship repair firms operating in San Francisco achieved total revenues of \$145 million in 1986. The share of revenue from Port operations was \$3,632,343.

Every dollar gained by ship repair firms creates an estimated total of \$1.47 in total City of San Francisco direct, indirect and induced output. In 1986, San Francisco Ship Repair output created a total direct, indirect and induced output of \$474 million in the City.

## CALCULATIONS

Total Annual Revenues	=	\$145,166,137
Port Staff Allocation	=	\$1,038,737
		-----
Total Employment		\$148,798,480
		=====



Multiplier Impact

Revenues in 1986

\$148,798,480

Multiplier

x 1.47

Direct, Indirect & Induced Revenue

-----  
\$218,733,766



***CHAPTER THREE***  
***FISHING INDUSTRY***





## CHAPTER THREE

### FISHERIES

#### INTRODUCTION

The fisheries industry consists of three distinct subsectors:

- o Commercial and Historic fishing vessels
- o Charter fishing vessels
- o Fish suppliers and processors.

The economic impacts of each of these sectors are summarized in the table below. In addition, payroll and possessory interest taxes are estimated to have been \$108,450 and \$36,000 respectively in 1986.

#### SUMMARY ECONOMIC IMPACTS

of SF FISHERIES \*

Category	Employment (FTEs)	Payroll (\$1,000)	Revenues (\$1,000)
-----			
DIRECT IMPACTS			
Commercial/Historic Vessel	180	\$3,320	\$8,514
Charter Boats	66	\$840	\$1,679
Processors/Buyers	99	\$3,070	\$36,570
Port Staff Allocation	10	\$340	\$1,190
	---	-----	-----
Total	355	\$7,570	\$47,954
	===	=====	=====

SF City Multipliers	Employment	Payroll	Revenues
-----			
Commercial/Historic Vessel	1.56	1.38	1.55
Charter Boats	1.56	1.38	1.55
Processors/Buyers	1.40	2.01	1.88

\* Estimates of the economic impact of the commercial fishing industry are difficult due to the proprietary nature of the baseline data and the fact that available economic models are not specifically tailored to reflect the nature of the San Francisco fishing industry. The following estimates are based upon limited data and a combination of economic modeling techniques which TIPS feels best represents San Francisco.



## TOTAL DIRECT, INDIRECT & INDUCED IMPACTS

Category	Employment (FTEs)	Payroll (\$1,000)	Revenues (\$1,000)
Commercial/Historic Vessel	281	\$4,582	\$13,196
Charter Boats	103	\$1,158	\$2,603
Processors/Buyers	139	\$6,170	\$68,752
Port Staff Allocation	15	\$560	\$2,151
	---	-----	-----
Total	538	\$12,472	\$86,704
	===	=====	=====

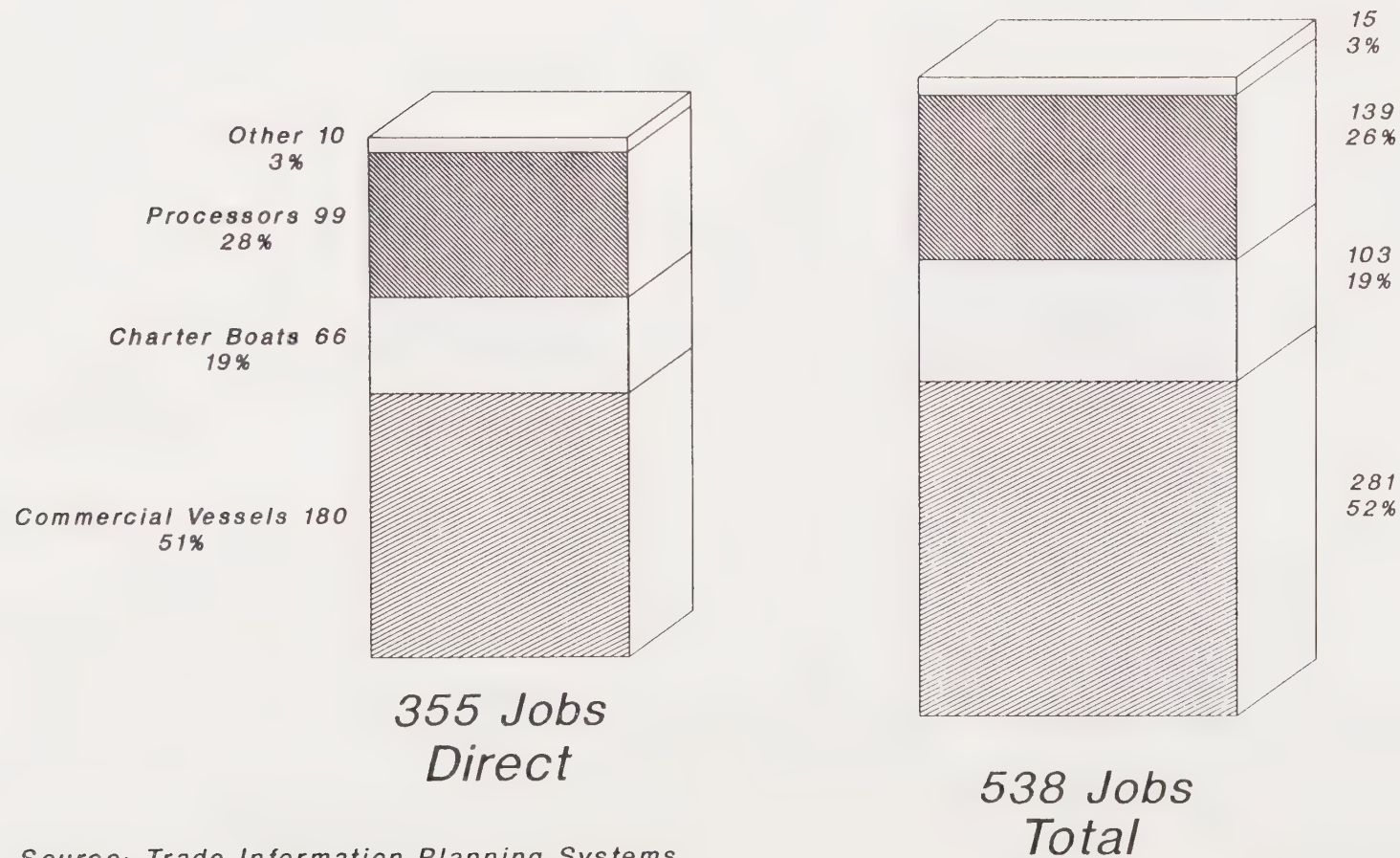
Notes: See following text for documentation, multipliers come from Portkit model. Fish processor/buyer revenues do not include the value of fish landed at the Port since this would represent doublecounting.

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*Source: Trade Information Planning Systems*



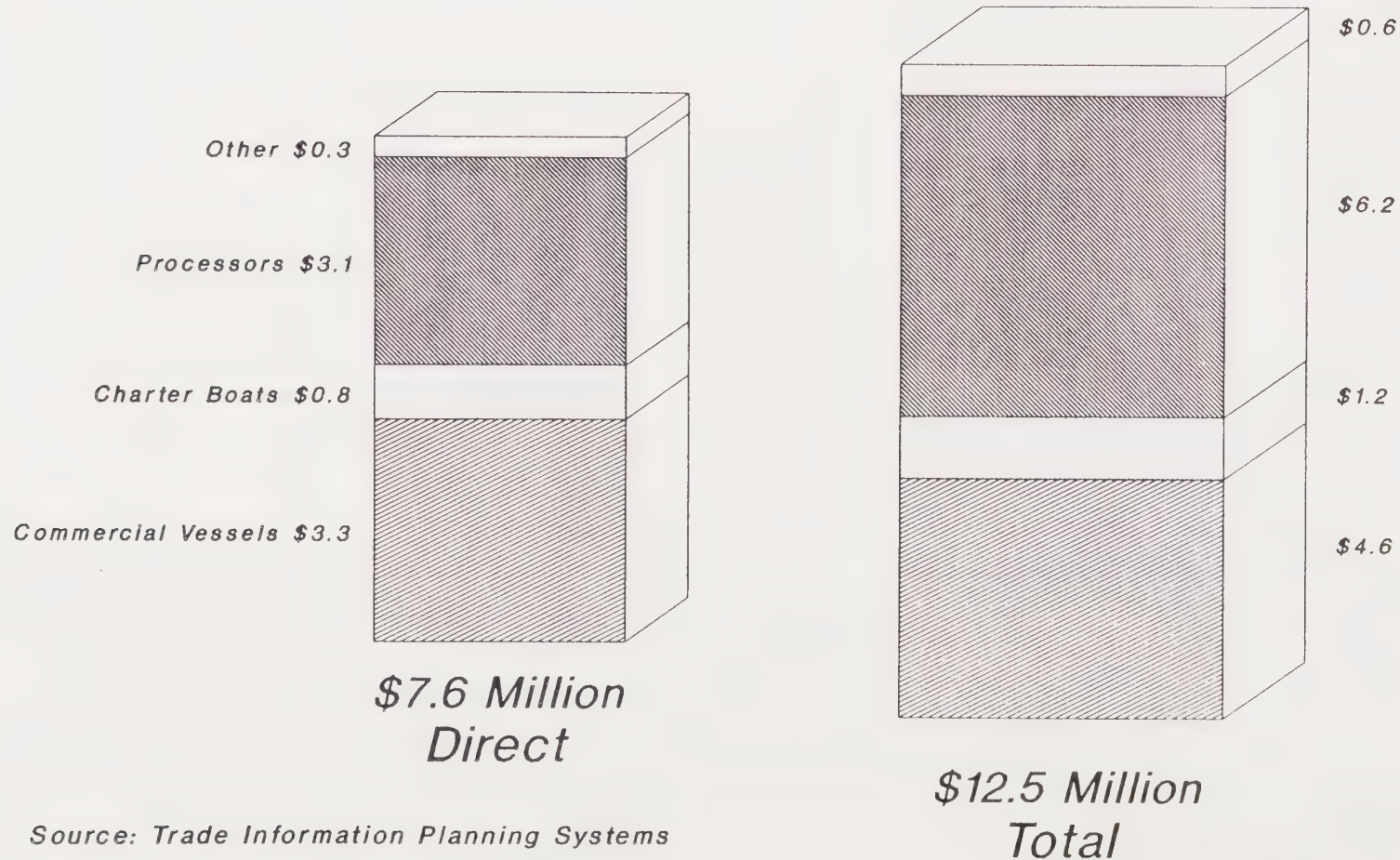
# *Port of San Francisco Employment Generated by Fisheries Sector*



*Source: Trade Information Planning Systems  
based upon 1986 information*



# *Port of San Francisco Payroll Generated by Fisheries Sector (\$ Millions)*

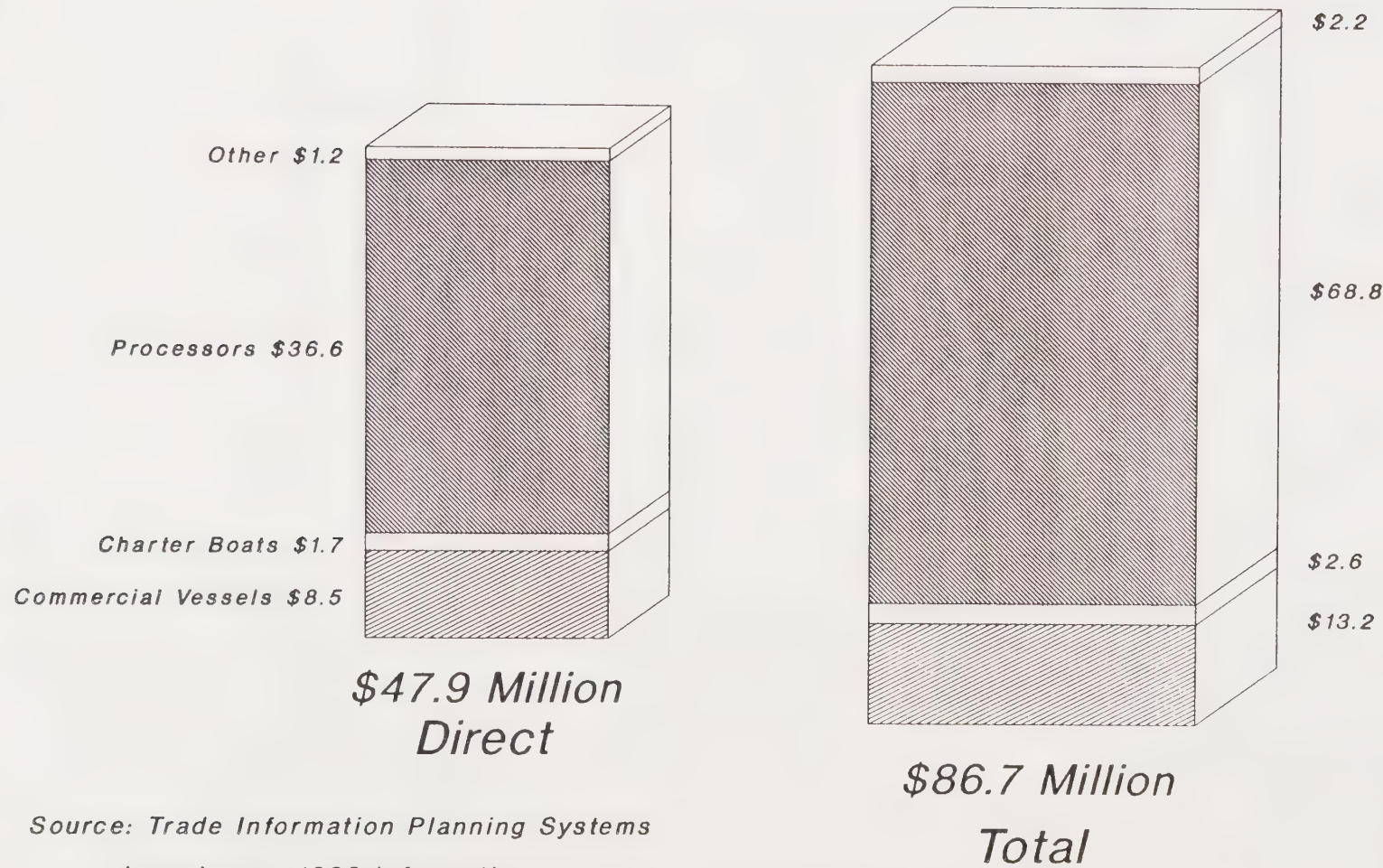


Source: Trade Information Planning Systems  
based upon 1986 information





# *Port of San Francisco Revenue Generated by Fisheries Sector (\$ Millions)*



Source: Trade Information Planning Systems  
based upon 1986 information



## COMMERCIAL & HISTORIC FISHING VESSELS

There are presently 67 active commercial fishing vessels and 22 historic fishing vessels moored at Fisherman's Wharf. In addition, there are numerous transient vessels which use Fisherman's Wharf and other Port facilities during peak herring and other seasons. The following analysis concentrates on vessels which moor at Port of San Francisco facilities on a year around basis.

Landings of fish at the Port have averaged more than 21 million pounds of fish valued in excess of \$8.5 million during the past eight years.

Year	Pounds	Value	\$/pound
1979	16,569,055	\$6,678,845	\$0.40
1980	20,865,154	\$11,344,143	\$0.54
1981	20,233,260	\$7,003,805	\$0.35
1982	28,703,634	\$9,504,079	\$0.33
1983	19,919,821	\$11,059,188	\$0.56
1984	18,771,630	\$5,733,161	\$0.31
1985	25,115,127	\$8,934,007	\$0.36
1986	21,515,286	\$7,855,594	\$0.37
Average	21,461,621	\$8,514,103	\$0.40

Source: California Department of Fish and Game

## EMPLOYMENT IN 1986

Commercial fishing vessels had an estimated total crew employment of 180 fishermen, including the owner/operators or captains of the vessels as well as other part time and full time crew. However, due to the highly seasonal pattern of commercial fishing, it is difficult to estimate the full time equivalent number of crew. We have assumed that those fishermen who spend 100 days or more fishing are full time equivalents.



Estimates of employment are derived from four data sources:

- o surveys performed by TIPS
- o surveys performed by Ms. Carol Brown (CB), a consultant to the Port of San Francisco
- o West Coast Fisheries Development Foundation's Economic Impact Kit which is entitled the Fisheries Economic Assessment Model
- o data tables from a study performed by ERG Pacific, Inc. entitled The Economic Issues Associated With Commercial Salmon Fishing And Limited Entry In California.

The multipliers for direct, indirect and induced impacts came from the AAPA Portkit Model. Every full time job in the commercial fishing industry created an additional 1.56 jobs in the City of San Francisco. For the 180 jobs in the commercial fishing industry it is estimated that a total 281 jobs are created in San Francisco.

Future increases may also be expected if fishermen increase their crew sizes. In 1987, 40 percent of the vessel operators anticipated increases in the number of part time employees. The remaining 60 percent anticipate no staffing changes. No vessel operators anticipate a decrease in staffing. In addition, some of the historic vessel operators may seek to become actively involved in the fishery again.

### *PAYROLL IN 1986*

Total gross payroll and crew share for commercial fishermen and historic vessel owners in 1986 is estimated to be approximately \$3.3 million. Payroll was estimated based upon a combination of survey results for larger active vessels and a percentage of crew wages to average vessel income based upon results in the ERG study and the West Coast Fisheries Development Foundation Model.

For every dollar of payroll in the fishery, \$1.38 dollars are estimated to be paid to employees in the City of San Francisco. The total effect of the fishermen's payroll is to create a total of \$4.6 million in the local economy.

San Francisco fishermen estimated that approximately 69 percent of all purchases are made in San Francisco. Therefore, the majority of the impact of the fishing industry on the Bay Area is experienced in the City of San Francisco.





## REVENUES IN 1986

Total annual revenues for commercial fishing vessels is estimated at \$8.5 based upon fleet landings at the Port of San Francisco.

One dollar of revenue generated by commercial fishing vessels is estimated to generate \$1.55 of revenues in the City of San Francisco. Fishermen revenues of \$8.5 million created a total direct, indirect and induced revenue in the City of San Francisco of \$13.2 million.

## CALCULATIONS

### FISHING VESSEL REVENUES

Year	Pounds	Value
-----		
Average	21,461,621	\$8,514,103
Multiplier		1.55
Total Impact		\$13,196,000

### EMPLOYMENT

Fishing Vessels	Number of Vessels	Crew (W/ Skipper)	FTEs
-----			
Groundfish Trawler	5	4	20
Troller	22	3	66
Part-time Troller	44	1	4
Seiner/Other	18	5	90
	--	--	---
Total	89	13	180
	==	==	===
Multiplier			1.56
Total Impact			281

---

Assumptions: Part-time Trollers are one-half time, others are fulltime





## PAYROLL

Categories	(\$1,000)	% of Total Value	Average Salary
Crew Shares	\$3,321	39.0%	\$18,406
Multiplier	1.38		
Total Impact	\$4,583		

## PERCENTAGE OF EXPENSES OCCURRING IN CITY

Expense Categories	(\$1,000)	% of Total Value
Total Variable	\$5,094	59.8%
Total Fixed	\$622	7.3%
Total Expenses	\$5,716	67.1%
Percent Occurring in SF	69.0%	
Expenses in SF	\$3,944	



## CHARTER VESSELS

Total employment for charter vessels is estimated to be 66 FTEs. An average of 3 crew members serve 10 to 15 passengers on each vessel. There are a total of twenty two party vessels using the Port of San Francisco. Assuming a multiplier of 1.56, direct, indirect and induced employment of 103 FTEs is created.

Total revenues for commercial fishing vessels is estimated to be \$1,679,563 dollars or \$76,344 per vessel per year (based on an average rate of \$35 dollars/ passenger and an average of 12.5 passengers per trip). The twenty-two charter vessels make an average of 174.5 trips/year for an estimated 47,987 person trips per year.

Each dollar of revenues creates approximately \$1.38 in additional City payroll. Charter vessel activity therefore creates payroll of \$1,158,000.

Each dollar of revenues also creates \$1.55 in direct, indirect and induced revenues. Charter Vessel activity therefore creates \$2,603,000 in direct, indirect and induced revenues in the City.

As with the commercial fishing vessels, supplementary data sources were used to generate estimated employment, payroll and income. The main source of supplementary data was Ms. Carol Brown's survey. Assessment of costs incurred by charter vessels will have to be performed in a later study.

## CALCULATIONS

### CHARTER VESSEL REVENUES

Number of Vessels	22
Average Number of trips/year	174.5
Average number of customers	12.5
Average revenue per customer	\$35
Annual estimated revenue	\$1,679,563
Multiplier	1.55
Total Impact	\$2,603,322



## PAYROLL

Categories	(\$1,000)	% of Total Revenue	Average Salary
Crew Shares	\$840	50.0%	\$12,724
Multiplier	1.38		
Total Impact	\$1,159		

## EMPLOYMENT

Number of Vessels	22
Average crew size	3
Direct FTEs	66
Multiplier	1.56
Total Impact	103



## FISH PROCESSORS & BUYERS

There are 21 fish processors and buyers located in three distinct areas at the Port of San Francisco, namely: Pier 45, Fish Alley and Pier 33.

Tenant	Area (Sq Ft)	Processing/ Cold Storage
Pier 45	79,000	48,158
Fish Alley	53,482	53,482
Pier 33	35,870	35,870
TOTAL	168,352	137,510

Source: Fisherman's Wharf Infrastructure Planning, Carol Brown July 1986

There are approximately 137,510 square feet of supplier/processing space in the above areas. Small processors and fish buyers/handlers in Northern California are estimated by West Coast Fisheries Development Foundation to have average revenues of \$1.7 and \$1.3 million respectively. Total sales are estimated to be \$45.1 million with \$8.5 million coming from SF fishermen across Port docks.

Payroll is estimated to be 4.6% and 10.68% of sales respectively for processors and buyers/handlers. Payroll is estimated to total \$3.1 million. At an average annual salary of \$31,000, total FTE employment is estimated to be 99 persons.

Using the general trade multiplier of 1.40 for trade, direct and indirect employment is estimated to be 139. No changes in employment were anticipated for 1987. Total direct, indirect and induced payroll and revenues are estimated to be \$6.2 million and \$68.8 million respectively. Since most of the processing firms receive fish from Monterey and other non-local areas, most of the indirect impact of fish processing is experienced outside of the City of San Francisco.





## CALCULATIONS

### REVENUES

Category	Number	Average Revenues (\$1,000)	Total Revenues (\$1,000)
Small Processors	8	\$3,593	\$28,746
Fish Buyers	13	\$1,257	\$16,339
	--		-----
Total	21		\$45,085
	==		=====

Less SF Value of Catch \$8,514

Total Processed/Handled in SF \$36,570  
=====

Multiplier 1.88

Total Impact \$68,752

Note: Control for doublecounting by subtracting value of landings by fishermen

### PAYROLL & EMPLOYMENT

Category	% Payroll	Payroll (\$1,000)
Small Processors	4.61%	\$1,325
Fish Buyers	10.68%	\$1,745
		-----
Total		\$3,070
		=====

Multiplier 2.01

Total Impact \$6,170

Average Salary (1986) \$31,000

Number of Direct FTEs 99

Multiplier 1.40

Total Impact 139



***CHAPTER FOUR***  
***PASSENGER VESSELS***



## CHAPTER FOUR

### PASSENGER VESSELS

#### INTRODUCTION

Employment related to passenger vessel operations results from three inter-related activities:

- o transportation services & related activities charged against movement of passengers, stores/bunkers and baggage*
- o passenger spending while in port*
- o ferries and harbor tour cruise lines.*

#### SUMMARY OF PASSENGER VESSELS

##### ECONOMIC IMPACTS (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	603 FTEs	942 FTEs
Payroll (\$1,000)	\$11,202	\$17,479
Revenue (\$1,000)	\$45,993	\$76,721

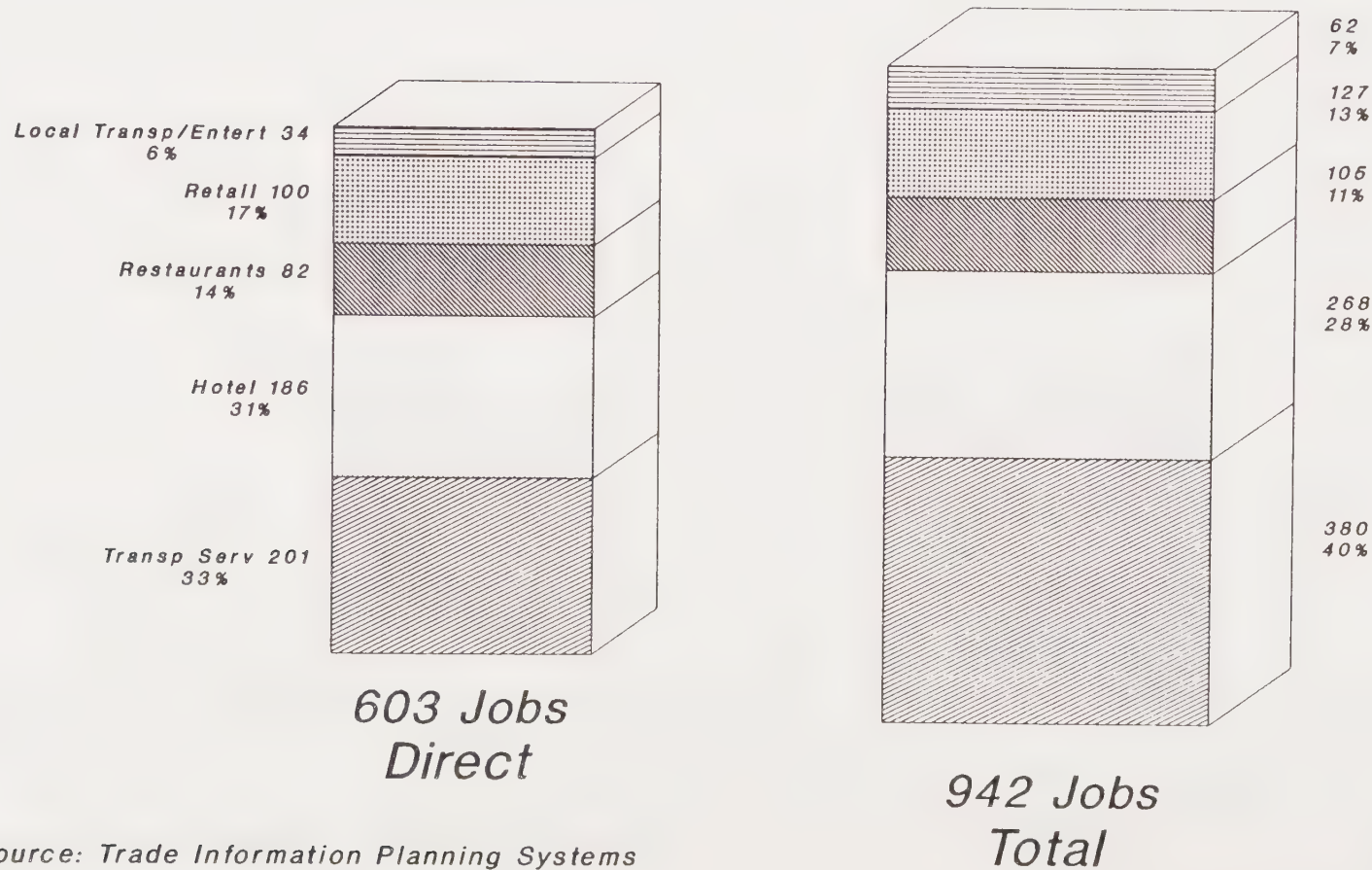
*Source: Trade Information Planning Systems*

Tourships, local harbor vessels and ferries create a direct economic impact representing more than 600 local fulltime jobs at a payroll exceeding \$11 million and with total revenue of more than \$45 million.

In addition, employment of 168 persons and payroll of more than \$4 million results from operation of smaller vessels in the area (e.g. Red & White, Blue & Gold, Hornblower Yachts and Exploration Cruise Lines).



# *Port of San Francisco Employment Generated by Passenger Vessels Sector*

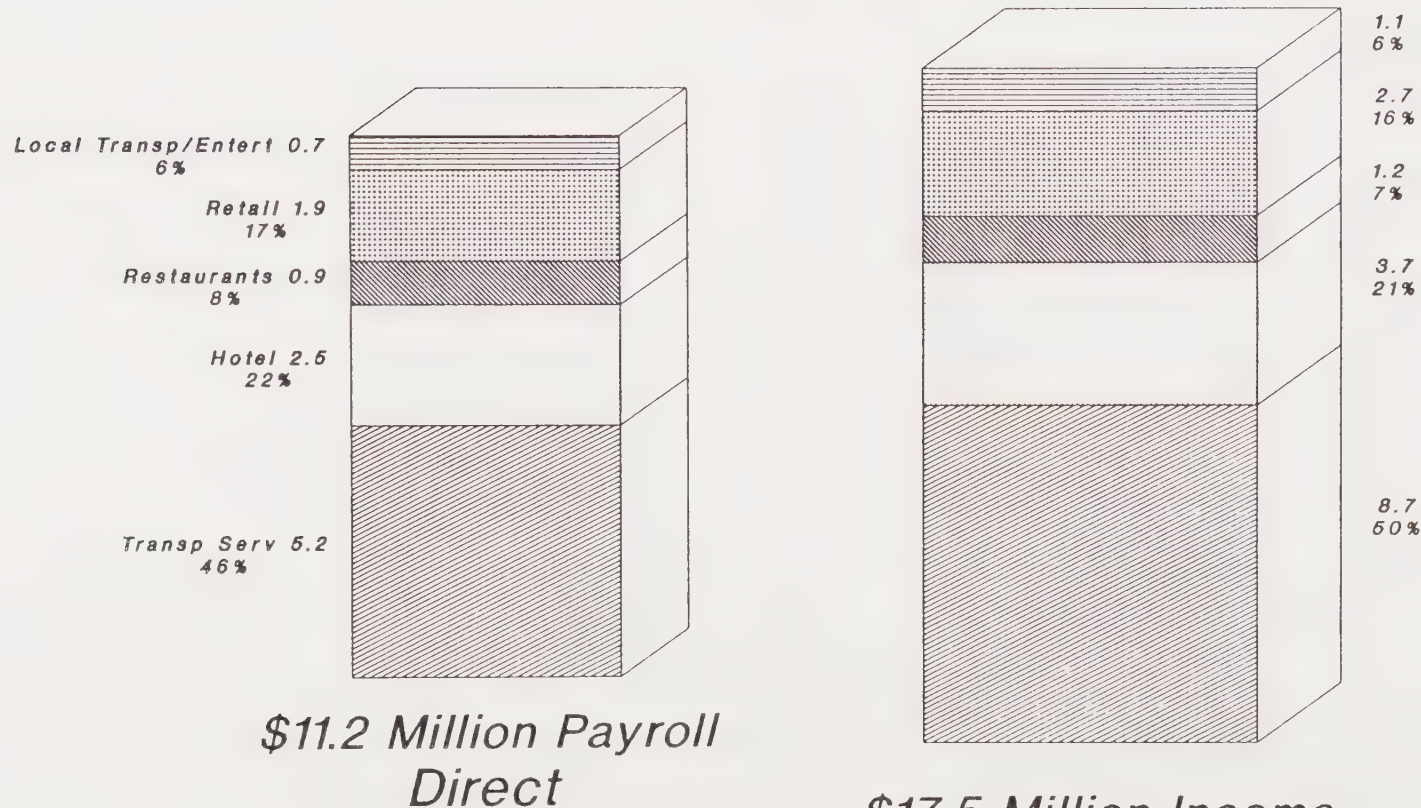


Source: Trade Information Planning Systems  
based upon 1986 information





# *Port of San Francisco* *Payroll Generated by* *Passenger Vessels Sector (\$ Million)*



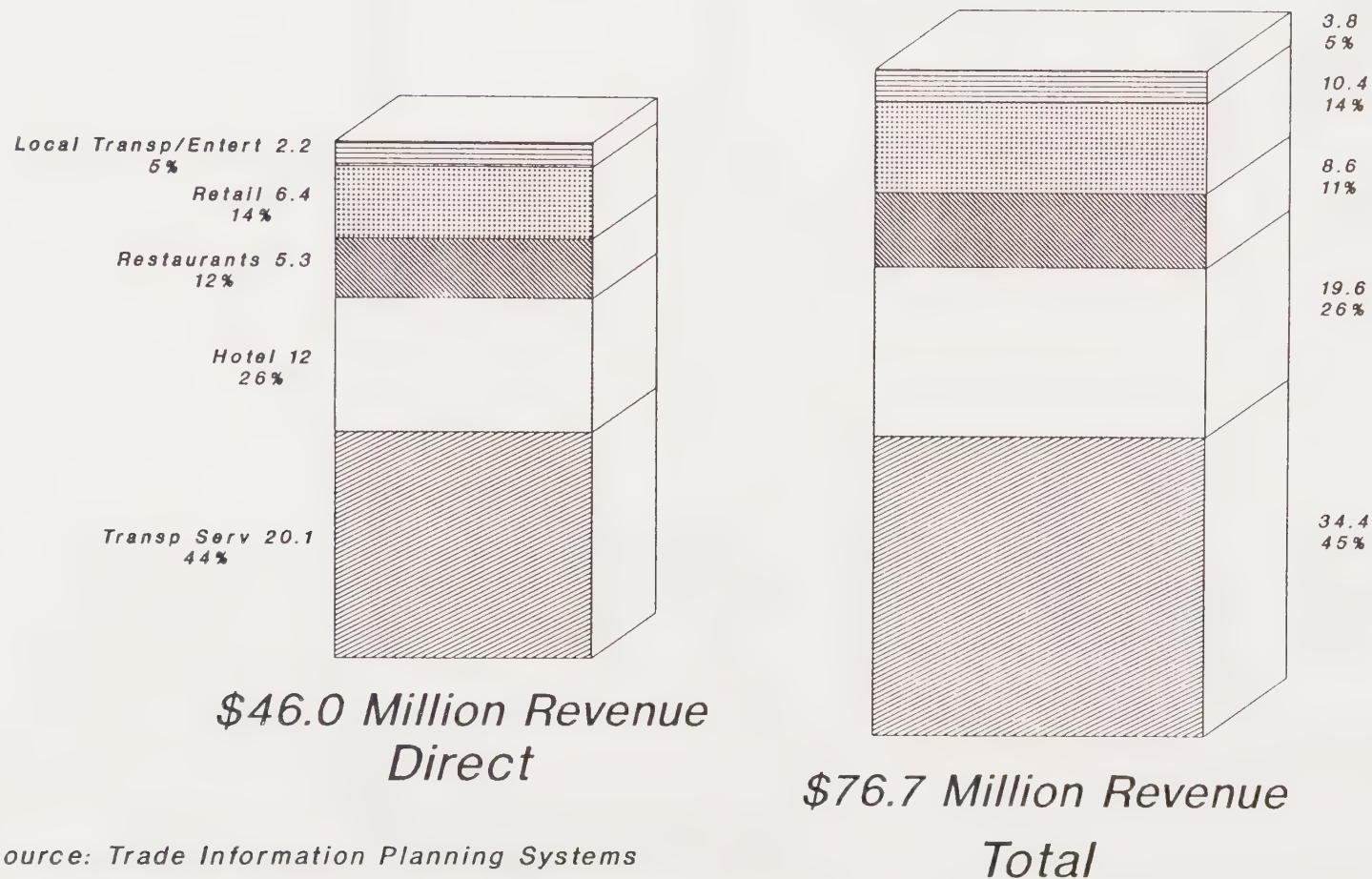
Source: Trade Information Planning Systems  
 based upon 1986 information

**\$17.5 Million Income  
 Total**



# Port of San Francisco

## Revenue Generated by Passenger Vessels Sector (\$ Million)



Source: Trade Information Planning Systems  
based upon 1986 information



## EMPLOYMENT IN 1986

Full time Employment in SF        =        603 FTEs

### Multiplier Impact

Employment in 1986	
Full Time Employment	603 FTEs
Multiplier	x 1.561
	-----

Total Direct, Indirect & Induced Employment	942 FTEs
--	----------

## SUMMARY OF EMPLOYMENT IMPACTS

Category	Direct Employment	Multiplier	Total Employment
Transp Serv (1, 2, 3, 4)	201	1.890	380
Hotel (5)	186	1.440	268
Restaurants (5)	82	1.280	105
Retail (5)	100	1.280	127
Local Transp (5)	26	1.890	50
Entertainment (5)	8	1.440	12
	---		---
TOTAL	603	1.561	942
	===		===

Source: Trade Information Planning Systems, multipliers for  
Induced and Indirect impacts from Portkit Model



## GROSS PAYROLL

Full Time Payroll = \$11,202,381  
=====

Average FTE Payroll per employee = \$18,578  
=====

Payroll Taxes in SF in 1986 from Direct Employment

= \$11,202,381  
x 1.5%  
-----  
\$168,035

Multiplier Impact

Payroll = \$11,202,381  
Multiplier x 1.560 (wt avg)  
-----

Direct, Indirect & Induced Income \$17,478,765

## SUMMARY OF PAYROLL IMPACTS

Category	Direct Payroll	Multiplier	Total Income
-----	-----	-----	-----
Transp Serv (1,2,3,4)	\$5,225,682	1.670	\$8,726,890
Hotel (5)	\$2,544,803	1.460	\$3,715,412
Restaurants (5)	\$853,773	1.430	\$1,220,896
Retail (5)	\$1,878,888	1.430	\$2,686,809
Local Transp (5)	\$513,693	1.670	\$857,867
Entertainment (5)	\$185,542	1.460	\$270,891
	-----		-----
TOTAL	\$11,202,381	1.560	\$17,478,765
	=====		=====

Source: Trade Information Planning Systems, multipliers for  
Induced and Indirect impacts from Portkit Model





## REVENUE IN 1986

Total Direct Annual Revenue in Bay Area = \$45,993,446  
=====

### Multiplier Impact

Revenue in 1986	
Passenger vessel Annual Revenue	\$45,993,446
Multiplier	x 1.668
	-----
Direct, Indirect & Induced Revenue	\$76,721,718
	=====

## SUMMARY OF IMPACTS ON REVENUE

Category	Direct Revenues (\$1,000)	Multiplier	Total Revenues (\$1,000)
Transp Serv (1, 2, 3, 4)	\$20,120	1.710	\$34,406
Hotel (5)	\$11,957	1.640	\$19,610
Restaurants (5)	\$5,296	1.620	\$8,580
Retail (5)	\$6,404	1.620	\$10,375
Local Transp (5)	\$1,686	1.710	\$2,884
Entertainment (5)	\$529	1.640	\$867
 TOTAL	 \$45,993	 1.668	 \$76,722

---

*Source: Trade Information Planning Systems, multipliers for  
Induced and Indirect impacts from Portkit Model*



SUMMARY OF DIRECT  
JOBS, PAYROLL & EMPLOYMENT  
by Vessel Type

	Number of Employees	Payroll (\$1,000)	Revenue (\$1,000)
-----			
<i>TOURSHIPS</i>			
Vessel Charges	33	\$1,037	\$8,258
Passenger Expenditures	401	\$5,977	\$25,873
	---	-----	-----
Total	434	\$7,013	\$34,131
	===	=====	=====
<i>SMALLER VESSELS</i>			
Vessel Charges	169	\$4,189	\$11,862
	===	=====	=====
Totals	603	\$11,202	\$45,993

---

*Source: Trade Information Planning Systems*



# *1. Pilot charges and Tug Assist Charges*

Pilot Charges for Navigation Services. The San Francisco Bar Pilot's Association office is located on Port property. Total employment at the SF Bar Pilot's office is 23 FTEs with an annual payroll of \$562,000. Average payroll is approximately \$24,500. In addition, there are approximately 18 additional employees elsewhere that support SF operations. These employees create an additional payroll of \$435,000.

Tug Assist. The average tug assist charge is \$1,200 which consists of an average four hour operation. Port operations requiring vessel assist totaled 77 passenger vessels (e.g. Exploration Cruise Lines does not require tug assist).

The average payroll for tug assist operation (including both shoreside personnel and crew) is \$40,000. Port operations contributed to \$117,000 in payroll and 3 FTEs in direct employment.

## *Attributable to Port of SF*

Pilot Service per Call	\$1,432.85
Tug Assist per call	\$1,200.00
Total	\$2,632.85

Number of Calls	77
Total Pilot & Tug Assist Charges	\$156,529

Payroll as % of Revenue	21.00%
Payroll	\$32,871
Average Wage	\$33,000



## 2. Stevedore Charges

Stevedore companies provide two important functions for SF tour ships:

- o Lines Handling
- o Baggage & stores loading/unloading

California Stevedore & Ballast has one full time employee and approximately two support people for tour ship operations.

### *Attributable to Port of SF*

FTEs (from Surveys)	3
Average Wage	\$23,000
Payroll	\$69,000
Estimated Revenue	
(payroll = 5% of Revenue)	\$1,380,000

#### *a. Longshore Lines Handling*

Lines handling (both tie-up and cast-off) for tour ship requiring lines handling (excluding Exploration Cruise Lines) is performed by longshoremen with the following standard agreements:

Time Period	Minimum Callout*
-----	-----
6am to 8pm (Mon - Sat)	2 hours
8pm to 6am (Evenings and Sunday)	4 hours

\* Vessel arrivals time periods control manning requirements

All Tour Ships arrive and depart in the minimum manning time.

As shown below, Port tour ship operations generated nearly \$30,000 in direct longshore wages (excluding benefits) in 1986. This translated to approximately 1 FTE posi-





tions (assumes \$25,199 per year per longshoreman in 1986 based upon PMA documentation).

*Attributable to Port of SF*

Employment	1 FTE
Payroll	\$29,921

**Tie-up Charges**

Time of Day	Manning	Percent of Ves	Number of Ves	Min Hrs	\$/Hour	Total Charges
-----	-----	-----	-----	-----	-----	-----
AM	6	100%	77	2	\$19.43	\$17,953
						=====

**Cast-off Charges**

Time of Day	Manning	Percent of Ves	Number of Ves	Min Hrs	\$/Hour	Total Charges
-----	-----	-----	-----	-----	-----	-----
AM	4	100%	77	2	\$19.43	\$11,968
						=====

TOTAL Tie-up & Cast-off	\$29,921
-------------------------	----------

**b. Baggage/Stores Handling**

Longshore work is also created in handling of baggage and stores at Pier 35. Average stores per vessel range from 100 to 125 tons. This requires a maximum of 26 porters. In the morning longshoremen discharge baggage and in the afternoon they load stores. The older vessels are very difficult to load and require additional men.

As an example, the Sea Princess recently required 2 full gangs and 400 man-hours of labor for stores. The gangs are the standard 4,2,2,1 with a supplement of 4 men. It takes approximately between 500 and 700 hours for baggage handling. Holland America's Noordam takes approximately 225,000 lbs to 250,000 lbs of stores every trip. They get their stores in Vancouver BC. Royal Viking gets all stores in SF as does the Sea Princess. The average store requirement for Royal Viking Lines is estimated to be 100 tons per trip.

In 1986, passenger vessels accounted for 46,540 tons of breakbulk discharged (mainly baggage) and 48,746 tons of breakbulk loaded (mixture of baggage and stores). The average vessel was loaded/discharged at a rate of 30 tons per hour. Therefore, the estimated labor created by



stores/baggage handling is 3,200 gang hours in 1986 (e.g. 30 tons/hour divided into 95,286 total tons = 3,176 gang hours) which translates to 28,585 man hours (e.g. 3,176 \* 9 = 28,585 man hours assuming a nine man gang).

Total hours of work	28,585 man hours
Average Wage	* \$19.43
	-----
Total Wages	\$555,422
Average salary	= \$25,199
Total FTE equivalents	= 22 FTEs

[Source: California Stevedore & Ballast]

### 3. Port Terminal Charges

The carrier generally pays the port tariffs including wharfage, dockage and passenger head tax.

In 1986, total charges amounted to the following (includes Exploration Cruise Lines):

#### *Attributable to Port of SF*

FTEs	12
Average Wage	\$35,000
Payroll	\$420,000
Port Charges	\$1,285,361

### 4. Supplies & Bunkers

An average of \$70,000 per vessel call is spent on stores and bunkers (Source: CS & B). For larger vessels, this creates the following impact:

This creates the following local expenditures:

#### *Attributable to Port of SF*

Estimated expenses per Call	\$70,000
Number of Calls	77
Revenue	\$5,390,000
Payroll (% of revenue)	1.60%
Payroll	\$86,240
Average Wage	\$27,000



## 5. Passenger Spending Impacts

Computation of Total Spending Impact by Cruise Ship Passengers (excludes Exploration and all inner Bay ferries and cruise ships)

### Attributable to Port of SF

Number of Emb/Disemb Pass	89,988
Less Doublecount of Homeporting Vessels *	31,717

\* Sitmar, Princess, Royal Viking

Adjusted # of Passengers	58,271
--------------------------	--------

Pass spending while in SF	\$432
---------------------------	-------

Passenger Spending	\$25,173,072
--------------------	--------------

	Percent	Spending By Category	Average Salary *
Lodging (1)	47.5%	\$11,957,209	\$13,691
Restaurant/Meals (2)	19.7%	\$5,380,050	\$10,370
Shopping (3)	24.1%	\$6,487,665	\$18,874
Transportation (4)	6.7%	\$1,686,596	\$19,498
Entertainment (5)	2.1%	\$528,635	\$22,579
Total			

Weighted Average salary is \$14,875 (Source; 1984 County Business Patterns, as updated to 1986 levels using GNP Implicit Price deflator from 1984 (111.7) to 1986 (122.7)).

- 1) SIC code is 70; emp = 15,663, payroll = \$195,696,000
- 2) SIC code is 58; emp = 30,832, payroll = \$291,784,000
- 3) SIC code is 53; emp = 5,691, payroll = \$98,024,000
- 4) SIC code is 411; emp = 856, payroll = \$12,845,000  
& SIC code is 751; emp = 727, payroll = \$15,322,000
- 5) SIC code is 70; emp = 5,013, payroll = \$103,292,000



*b. Intransit Passenger Spending*

Total Number of Embarking & Disembarking  
Passengers 89,988

Estimated % of Intransits 15.00%  
(Source: Vancouver Port Corporation)

Intransit Passengers 13,498  
Exploration Passengers 3,340  
Total 16,838

Average Expenditure \$50

Total Expenditure \$841,910

Total Spending = \$23,983,184

*Summary of Expenditures*

*Weighted Average all Cruises*

	Lodging	Meals	Shopping	Transp	Entert/ Other	Total
Average	\$205	\$85	\$104	\$29	\$9	\$432
Total	\$102,424	\$42,389	\$52,134	\$14,314	\$4,696	\$215,957

Number of Surveys = 500

---

Source: Port Interviews taken in 1986





***CHAPTER FIVE***  
***RESTAURANTS & RETAIL SHOPS***



## **CHAPTER FIVE**

### **RESTAURANTS & RETAIL SHOPS**

#### **INTRODUCTION**

There are 49 restaurants, delicatessens, cafes and other eating establishments renting space from the Port. Approximately 15 of these restaurants are located in Fisherman's Wharf with the remainder spread throughout the Port.

#### **SELECTED FISHERMAN'S WHARF RESTAURANTS**

Alioto's  
Castagnola's  
Fish Alley Bar & Grill  
Fisherman's Grotto #9  
Francheschi's  
Franciscan Restaurant  
Gelardi's  
Borruso's Lighthouse  
Patio Sandwich Shop  
Pompei's Grotto  
Sabella & Latorre  
Scoma's Restaurant  
Tarantino's Restaurant

#### **SELECTED RESTAURANTS AT OTHER LOCATIONS**

Boondocks Restaurant  
BOUNTY Restaurant  
California Cafe  
Ferry Plaza Restaurant  
Fog City Diner  
Java House Restaurant  
La Fete Gourmet Deli  
Mission Rock Resort  
Olive Oil's  
Pier Inn  
Pier 1  
Pier 23 Restaurant  
Pier 80 Inn  
The Ramp Restaurant  
Sinbad's  
Sailing Ship Dolphin P. Rempp  
Waterfront Restaurant  
World Trade Club



In addition, Pier 39 has an extensive selection of restaurants as well as a large number of retail shops.

These restaurants and retail shops created the following impacts for the City:

### *RESTAURANTS & RETAIL SHOPS*

#### *SUMMARY OF ECONOMIC IMPACTS (1986)*

Category	Direct Impact	Direct, Indirect & Induced Impact *
Employment	2,058 FTEs	2,634 FTEs
Payroll (\$1,000)	\$23,755	\$33,970
Revenue (\$1,000)	\$113,593	\$184,020

\* Multipliers come from Portkit Model

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Source: Trade Information Planning Systems

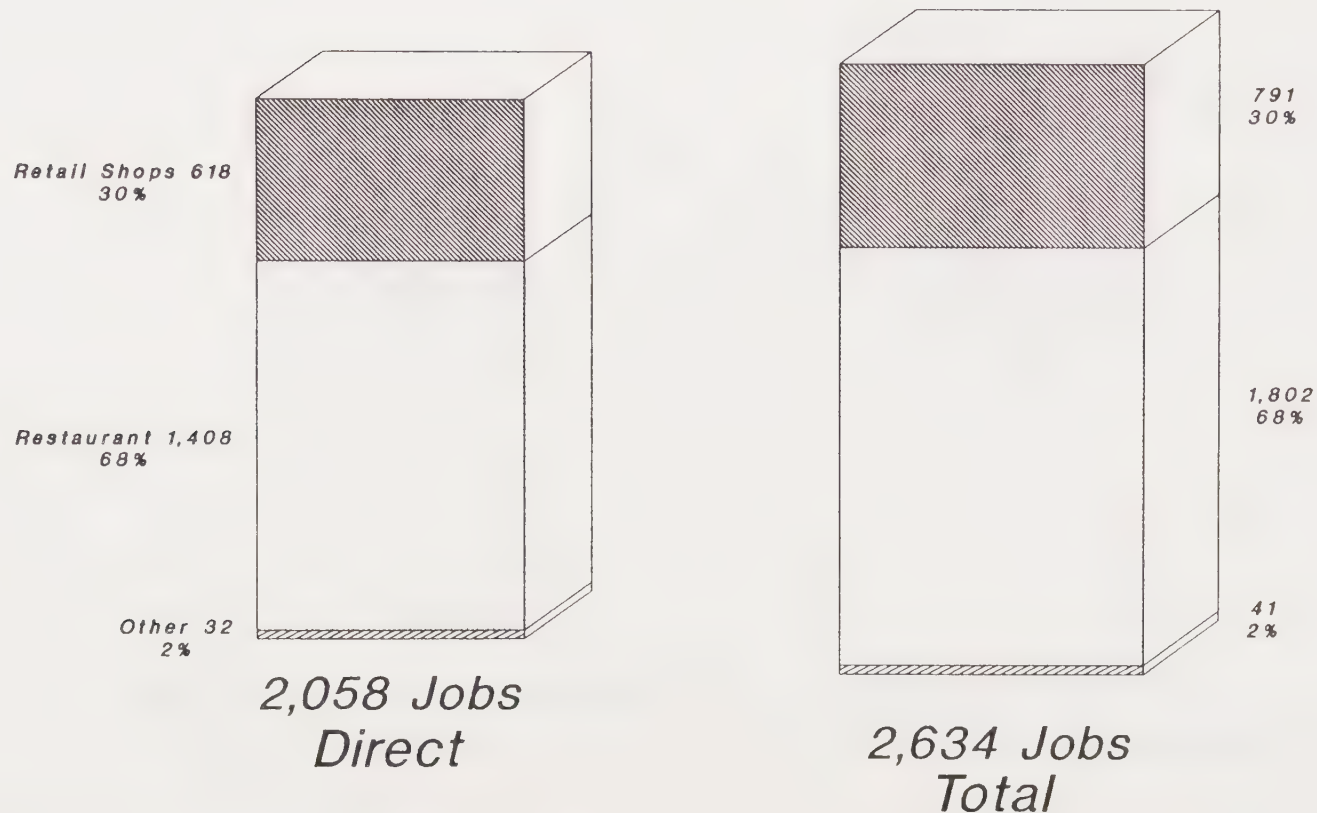
In 1986, the Port's restaurants and retail shops generated estimated revenues of \$49,990,000 and \$59,796,045 respectively. This estimate is based upon actual gross revenues reported to the Port as well as telephone surveys with selected firms. Total direct, indirect and induced revenues for both categories combined is estimated to be \$177,853,748 for 1986. In addition, this sector's share of Port allocated revenues was \$3,806,630.

Payroll was estimated to be 27.4% and 15.0% of gross revenues for restaurant and retail shops respectively which are the industry standards for San Francisco.

Employment was calculated by dividing estimated payroll by the average fulltime salary reported which equalled \$9,727 and \$14,515 in 1986 for restaurant and retail workers respectively. In addition, telephone interviews were conducted with key establishments to verify number of employees and payroll.



# *Port of San Francisco Employment Generated by Restaurant/Retail Sector*

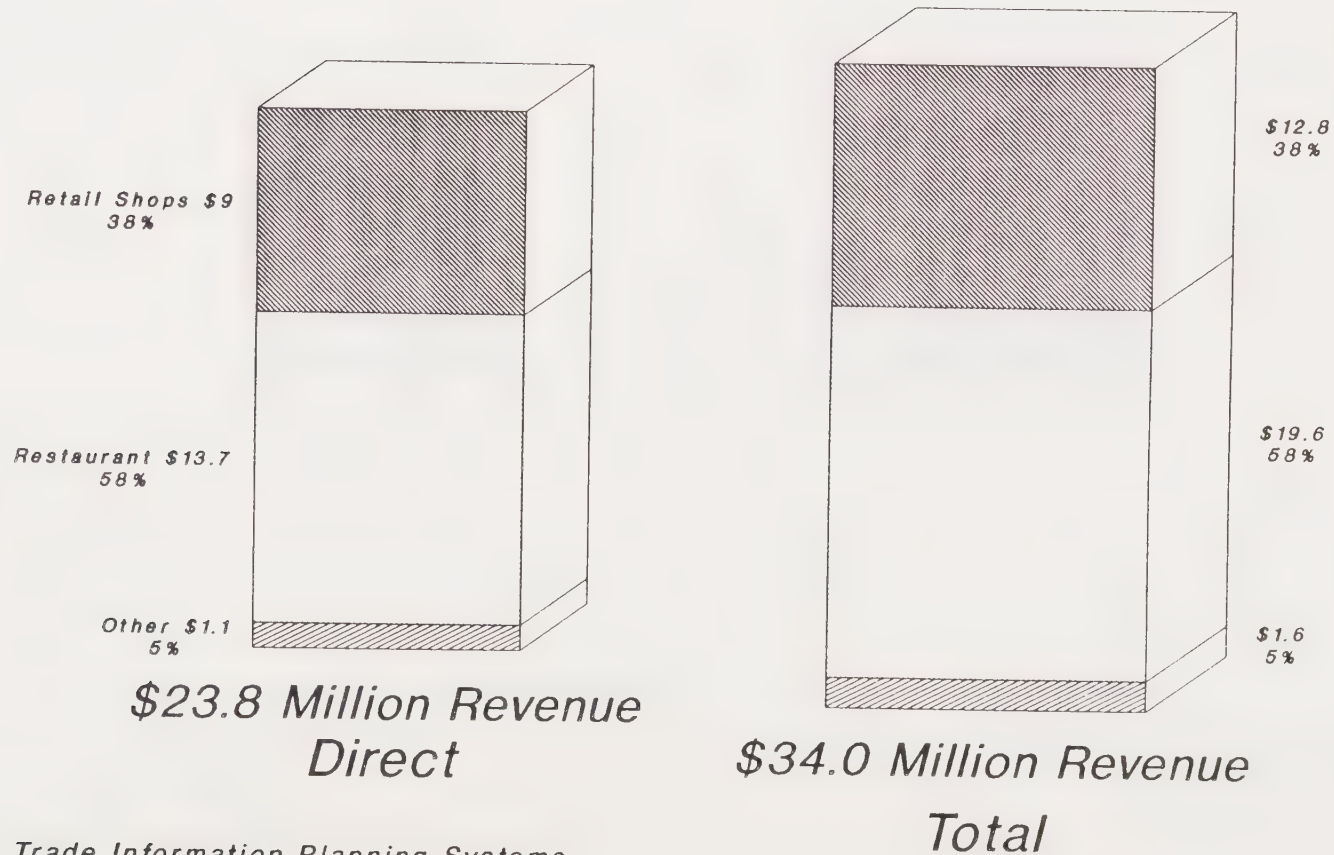


Source: Trade Information Planning Systems  
based upon 1986 information





# *Port of San Francisco Payroll Generated by Restaurant/Retail Sector (\$ Million)*

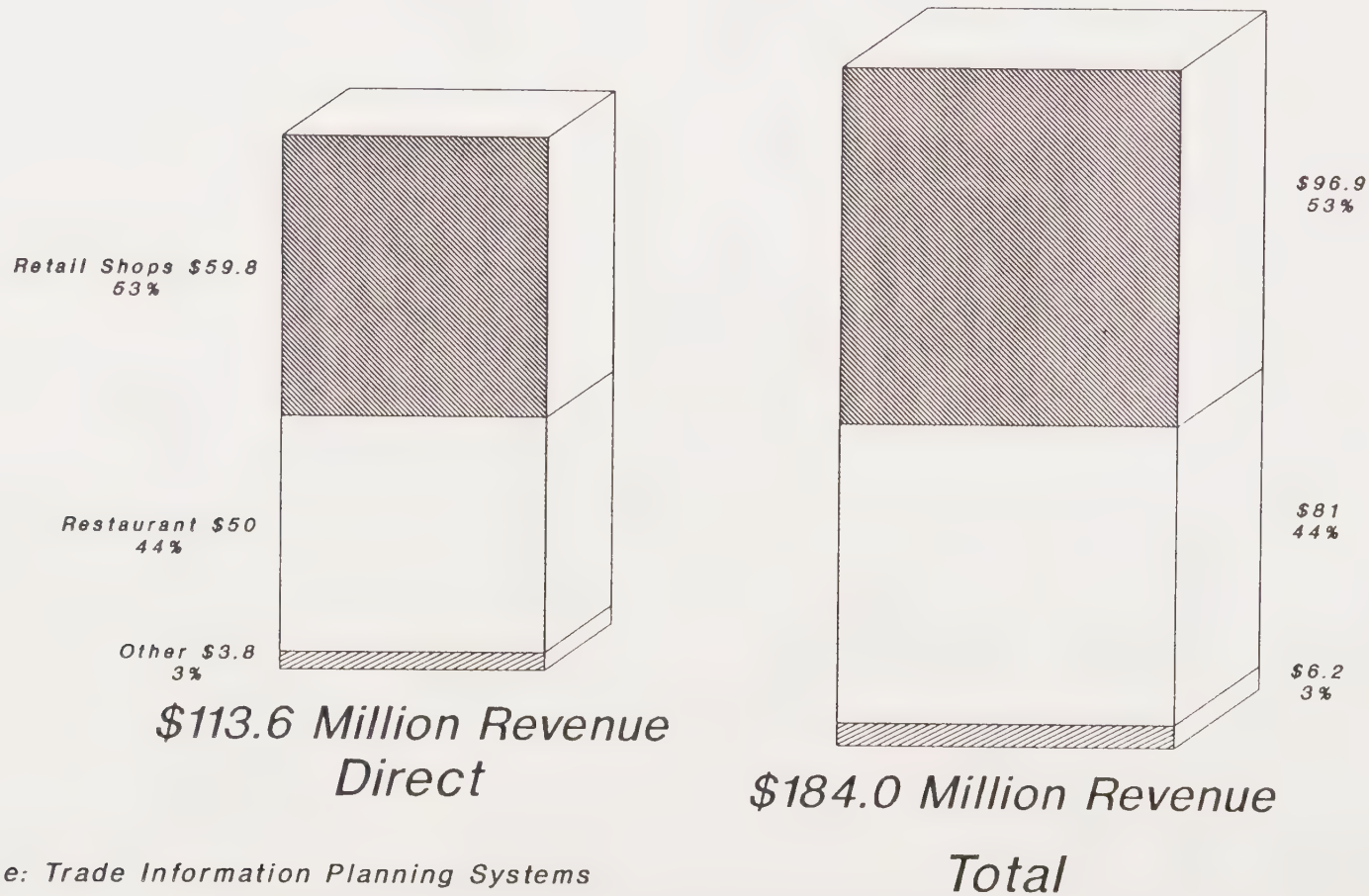


*Source: Trade Information Planning Systems  
based upon 1986 information*



# *Port of San Francisco*

## *Revenue Generated by Restaurant/Retail Sector (\$ Million)*



Source: Trade Information Planning Systems  
based upon 1986 information



## CALCULATIONS

	Restaurant	Retail	Total
<hr/>			
Gross Revenue	\$49,990,219	\$59,796,045	\$109,786,264
Port Allocated Revenue			\$3,806,630
<hr/>			
Total Revenue			\$113,592,894
Payroll as % Revenue	27.40%	15.00%	
Payroll	\$13,697,320	\$8,969,407	\$22,666,727
Port Allocated Payroll			\$1,088,577
<hr/>			
Total Payroll			\$23,755,304
Average Salary	\$9,727	\$14,515	
Employment	1,408	618	2,026
Port allocated Staff			32
<hr/>			
Total employment			2,058

## SF CITY MULTIPLIERS

	Restaurant/Retail
<hr/>	
Employment	1.28
Income	1.43
Revenue	1.62

## TOTAL IMPACTS

Employment	=	2,634
Income	=	\$33,970,084
Revenue	=	\$184,020,488



## ***CHAPTER SIX***

### ***OFFICE & OTHER COMMERCIAL BUSINESSES***





## CHAPTER SIX

### OFFICE & OTHER COMMERCIAL FIRMS

#### INTRODUCTION

In addition to the other sectors which are well defined above, there is an amorphous group of office and commercial businesses which rent space directly from the Port or use space in buildings which are located on property leased from the Port.

These businesses utilized 944,681 square feet of space at buildings on Port property.

Summaries by Category	Square Feet	Employment
Agriculture Building	18,417	74
World Trade Center/ Ferry Building *	104,744	419
Ground Leases	582,641	2,331
PIER 80	2,926	12
Misc Buildings	289,573	1,158
TOTALS	944,681 =====	3,993 =====

\* Does not include Port offices

The estimated economic impact of these facilities is summarized in the following table:

#### OFFICE & OTHER COMMERCIAL FIRMS

##### Summary of Economic Impacts (1986)

Category	Direct Impact	Direct, Indirect & Induced Impact
Employment	4,084 FTEs	5,881 FTEs
Payroll (\$1,000)	\$90,590	\$132,262
Revenue (\$1,000)	\$248,305	\$407,221

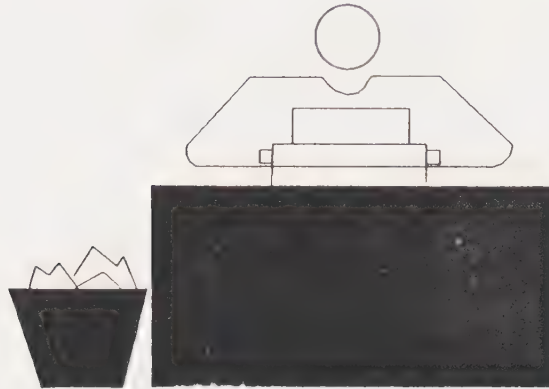
*Source: Trade Information Planning Systems*



# *Port of San Francisco*

## *Economic Impact from*

### *Office & Other Commercial Sector*



#### *Direct Impacts*

*4,084 Jobs*

*\$90.6 Million Payroll*

*\$248.3 Million Revenue*

#### *Total Impacts*

*5,881 Jobs*

*\$132.3 Million Income*

*\$407.2 Million Revenue*

*Source: Trade Information Planning Systems  
based upon 1986 information*



## CALCULATIONS

### EMPLOYMENT

Office/commercial space	944,681 SQ. FT.
SQFT/EMP	250 SQFT/EMP
Direct office employment	3,993 FTEs
Port Staff Allocation	91 FTEs
	-----
Total Employment	4,084 FTEs
Multiplier	x 1.44
	-----
Total employment	5,881 FTEs

### PAYROLL

Average Wage	\$21,916/employee
Direct office employment	x 3,993 FTEs
	-----
Payroll	\$87,515,059
Port Staff Allocation	\$3,075,015
	-----
Total Employment	\$90,590,074
Total income multiplier	x 1.46
Total income	\$132,261,508

### REVENUES

Direct Revenues	\$237,552,589
Port Staff Allocation	\$10,752,972
	-----
Total Employment	\$248,305,561
Multiplier	x 1.64
	-----
Total Revenues	\$407,221,120





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**RETURN  
TO →**

1	2	3
4	5	6

ALL BOOKS MAY BE RECALLED AFTER 7 DAYS

**DUE AS STAMPED BELOW**

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<b>JAN - 3 1995</b>		

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 BERKELEY, CA 94720

